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ABSTRACT

The accomplishments of a team of writers, designers, and education specialists commissioned by the National Institute of Education (NIE) to suggest solutions to the problems that public documents often pose for readers are summarized in this report. Following an overview, the report offers a section on the history and rationale of the Document Design Project. The next two sections explain the research and technical assistance and training components of the project. The fourth section discusses the project's undergraduate curriculum to improve the teaching of writing, while the fifth section presents graduate programs in rhetoric and writing at Carnegie-Mellon University. Section 6 describes efforts at disseminating information about the project's work, and the report concludes with project plans beyond NIE funding. An appendix contains technical reports, publications, articles, and presentations by Document Design Project staff. (HTH)

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DOCUMENT DESIGN PROJECT

Document Design Project

Final Report

Prepared for the National Institute of Education, Washington, D.C.
under contract No. NIE-400-78-0043

CS 207 189

November 1981

AMERICAN INSTITUTES FOR RESEARCH/1055 Thomas Jefferson Street, NW, Washington, DC 20007 202/342-5000
with CARNEGIE MELLON UNIVERSITY
and SIEGEL & GALE

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ABOUT THE DOCUMENT DESIGN PROJECT

In September 1978, the American Institutes for Research (AIR) began the Document Design Project to foster clear and simple writing and design of public documents. The purpose of the Document Design Project (DDP) was to help make forms, regulations, brochures, and other written materials easier for people to read, to understand, and to use. Carnegie-Mellon University and Siegel & Gale, Inc. worked with AIR on this project. The project was funded by the Teaching and Learning/Reading and Language group at the National Institute of Education.

The Project's goal was to increase the knowledge and skills of people who produce public documents. To accomplish this goal, the Document Design Project had three tasks:

> Task 1: To conduct theoretical and applied research studies on language comprehension, on the ways in which skilled and unskilled writers work, on problems associated with different document features;
>
> Task 2: To bring research into practice by working with government agencies as they produce materials for public use;
>
> Task 3: To bring research and practice into education by developing courses on writing and design for graduate students and undergraduates.

If you have questions or comments on this report or on other work of the Document Design Project, contact Dr. Janice C. Redish, Director, The Document Design Center, AIR, 202/342-5071.

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The Document Design Project

Overview

During the past 39 months, a team of linguists, psychologists, English professors, instructional researchers, bilingual education specialists, writers, and graphic designers worked together to increase our understanding of the problems that public documents create for readers and to suggest and try out solutions to the problems that were identified. NIE gave this team three tasks:

1. to conduct research on why so many documents cause problems for readers and on why the people who write and design documents so often develop material that other people can't understand;

2. to test the usefulness of what we learn from research by conducting technical assistance and training projects with writers in public agencies;

and

3. to put what we learn from research and practice into improving the teaching of writing by creating new undergraduate and graduate curricula.

This report summarizes the accomplishments of the Document Design Project. We review briefly:

1. the history and rationale of the project
2. the research component
3. the technical assistance and training component
4. the new undergraduate curriculum to improve the teaching of writing
5. the new graduate curriculum to train future researchers, practitioners, and educators
6. the dissemination of information about the Document Design Project

and

7. next steps: continuing what NIE began.

We hope that this report gives the reader an understanding of the scope and the major results of the Document Design Project, but the accomplishments of the project are really embodied, not in this report, but in our products. In three years, the Document Design Project staff produced:

- 17 technical reports
- a 171-page monograph on relevant research from six disciplines
- 36 papers published or accepted for publication in books and professional journals
- more than 150 papers, workshops, and symposia presented at conferences and professional meetings
- 35 technical assistance projects covering a wide range of documents and agencies

- two sets of training materials (one for writers; one for people who supervise writers)

and

- three books

  - Writing in the Professions (a course guide and instructional materials for an advanced composition course)

  - Guidelines for Document Designers (a teaching and reference book for practicing writers)

and

  - Composing and Reading: A Multi-Disciplinary View of Theory and Research (a book of readings for a first-year graduate school course).

1. The History and Rationale of the Project

The Document Design Project was funded by the Teaching and Learning/Reading and Language Group at the National Institute of Education. The project was created by NIE through a request-for-proposal and was carried out by a consortium of three groups. The American Institutes for Research (AIR) was the prime contractor, taking the lead on the tasks of research, technical assistance and training, and the development of a new undergraduate curriculum. Carnegie-Mellon University, through the Departments of Psychology and English, conducted research and created a new interdisciplinary graduate program. Siegel & Gale, a private design firm in New York, contributed their practical experience and knowledge of clear writing and design to all the components of the project.

NIE developed the Document Design Project because they recognized that the problem of functional literacy in America today is as much a problem of incomprehensible documents as it is of people who have poor reading skills. The skills of readers and the demands made on them by the documents they have to read don't match.

The mismatch can be attacked from both sides. In addition to teaching functional reading skills to the people who must use the documents, we should also make the documents easier to read

and understand. In order to do the latter, we must teach functional writing skills to the people who create the documents.

We still need to develop better teaching methods in reading, particularly in teaching students how to read and deal with the documents that are part of adult life in America. When we examine typical documents, however, we realize that even expert readers have trouble understanding many of them. Consider, for example, job application forms like the Federal Government's SF-171, forms for educational loans or scholarships, information and applications for benefits programs, consumer credit documents, rental agreements, or medical consent forms, to name just a few.

Three-and-a-half years ago, when NIE developed the Document Design Project, most of these documents were poorly-written, poorly-organized, and poorly-designed. They presented material and asked questions in ways that contradict rather than take advantage of the reader's expectations and cognitive processes. NIE wanted to see what could be done to improve public documents by improving the knowledge and skills of the document designers. The Document Design Project was, thus, part of NIE's growing interest in research on effective writing skills, which they had come to realize was a necessary counterpart to the development of effective reading skills that they had been supporting for many years.

NIE was also concerned with the inequities in the problems created by incomprehensible public documents. Although we all suffer because of the time and effort that we must devote to difficult documents, and the psychological distress they cause, the poor and least educated suffer most. The hurt is greatest for people who are dependent on the programs that generate some of the most difficult public documents. Documents are, in effect, gatekeepers, controlling access to many jobs, to money for education, and to many kinds of benefits. Those who can understand the rules and complete the forms get in; those who cannot are kept out.

The Document Design Project focused primarily on documents that are of critical importance to large numbers of people who could be badly hurt if they did not understand the documents. We conducted studies of how people in an Hispanic community cope with difficult documents, of how people with different levels of education, experience, and fluency in English approach the task of filling out a complex job application form, of how the owner of a section 8A small business manages with the regulations that govern the program on minority-owned businesses. We also helped writers create models of well-organized, well-written, and well-designed documents, such as college aid forms, immigration forms, income tax instructions (in English and Spanish), medical consent forms for adults and children, leaflets about

prescription drugs, and material on fire safety in group homes for the mentally and physically disabled.

In setting up the Document Design Project, NIE had the foresight to include, within one team, all of the people and tasks needed to move from research to practice to improved instruction. This went far beyond the usual arrangements. In a recent issue of Visible Language, British researcher Patricia Wright describes the communication gap that usually exists between academic researchers and the writers and designers who create documents.* She discusses the value of a "bilingual" intermediary who can speak the languages of both researchers and practitioners to bring together and interpret research findings for document designers. Because of the broad scope of the project, this was a role that the Document Design Project was able to play. She also discusses the importance of greater interaction between researchers and practitioners to make the research respond to practical issues and to make sure that the practical applications of the research are, in fact, evaluated and added to the research literature. This type of interaction has also been part of the Document Design Project. NIE, in the Document Design Project, also went a step beyond Wright and brought the research and practice into new curricula for future researchers and future document designers.

*P. Wright, Strategy and tactics in the design of forms. Visible Language, 1980, 14 (2), 151-193.

2. The Research Component

Overview

A major goal of the Document Design Project has been to design, conduct, evaluate, and integrate basic and applied research in order to improve public documents. Over the course of the project, the research group has produced 17 technical reports and 36 published articles in meeting this goal. These reports and published articles (as well as papers presented at meetings and other unpublished reports) represent the principal results of the research component. We encourage the reader to "go to the source" to get a complete picture of all of our research activities and findings. (We list technical reports, published papers, and presentations in Appendix A.)

In summarizing these activities for the purpose of the present report, we will begin with the conceptual framework that drove the research effort. Then we will trace the evolution of each of the aspects of the research program from this overall framework and present brief summaries of the studies we conducted.

The conceptual framework: A program to produce reliable and valid guidelines

One of the principal objectives of the research component of the Document Design Project was to add to the knowledge that is necessary to produce a set of reliable and valid guidelines that document designers can use. In Figure 1 below, we picture a plausible sequence of activities for achieving this objective.

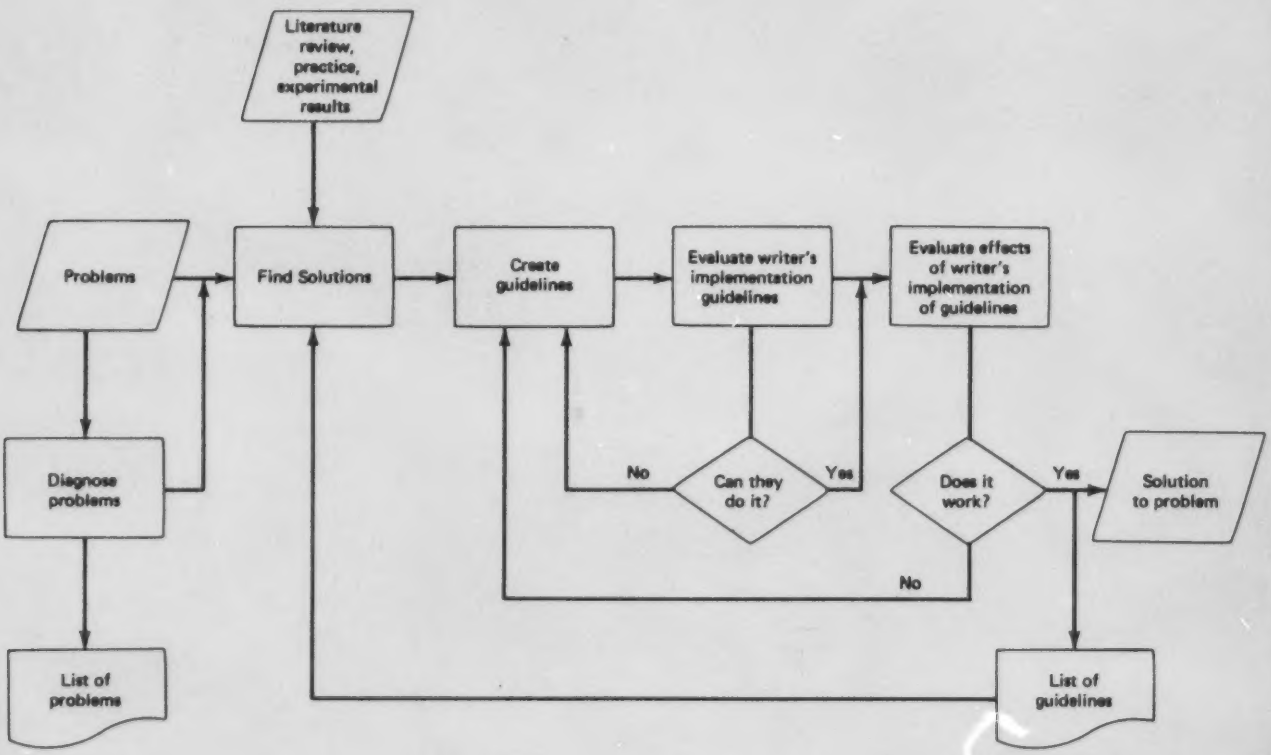

FIGURE 1. Program to Produce "Guidelines"

The input to this "program" is a specific problem--from the point of view of the user, the producer, or a third-party analyst. The first two processes that occur are to diagnose the problem--that is, to find the particular sources of difficulty--and to find a solution. Solutions can come from existing theories, current practices, experimental results, and/or existing guidelines.

If we find a solution, we can proceed to the next set of processes, which convert the solution into a practical guideline that typical writers can use. In these processes, we first create a tentative guideline and then evaluate whether writers can use it. If they cannot, we must revise the guideline and re-evaluate it until it can be used.

When we have a usable guideline, we can go on to the next process--evaluating whether the guideline, as the writer uses it, resolves (or at least reduces) the original problem. If it does not, we must return to the step of creating the guideline, revise it and repeat each of the testing processes.

The overall program has three tangible products. The first is a specific solution to each problem that set the program in motion; the second is a compilation of the problems that we have identified and diagnosed; the third is a compilation of guidelines that have been empirically validated by actual

writers. If repeated several times, this program will also produce several secondary products, such as new experimental results and new methods for diagnosing problems, for evaluating writers, and for evaluating documents.

For this overall program to work, we must make several assumptions. For example, we must assume that we know how to identify and diagnose problems, that we have (or know how to generate) solutions, that we know how to create guidelines, and that we know how to evaluate both writers and documents. In fact, in the course of the Document Design Project, each of these assumptions led to its own research program. Let us briefly describe the five research programs that spun out of our general program to produce reliable and valid guidelines that writers can use.

The program to identify problems

The first major activity in the development of guidelines is to identify and isolate problems. As we show in Figure 2, several processes must occur. In order to understand the problem, we must analyze the users, the producers, and the documents; we must review the experimental, theoretical, and applied literature; and we must develop new analytical methods where necessary.

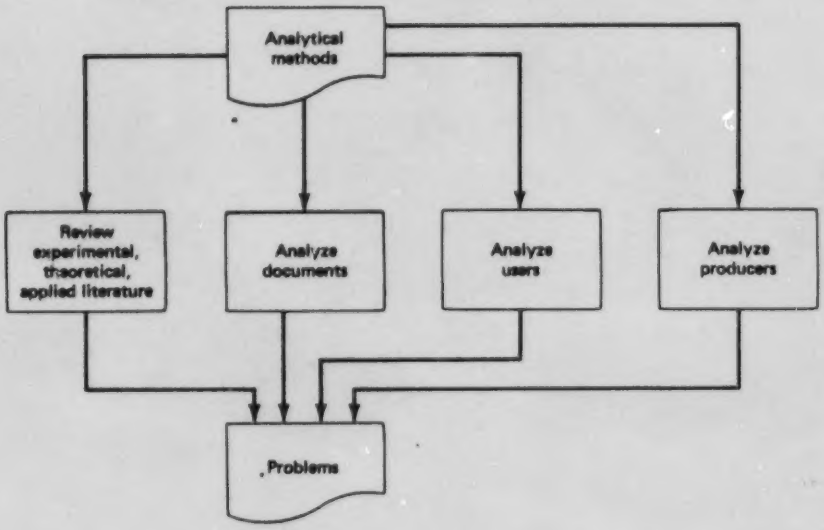

FIGURE 2. Program to Identify Problems

The principal outputs of this program are, first, a "data base" of problems, and second, a set of analytical methods for identifying and isolating problems. The "data base" could be organized by types of users, types of documents, types of producers, or the interactions among these types. The analytical methods could also be organized around specific objectives--user analysis, producer analysis, and so forth.

The program to solve problems

Following the process of identifying problems, the next activity in the guidelines program is to find solutions to specific problems. Figure 3 represents a "blow-up" of this component.

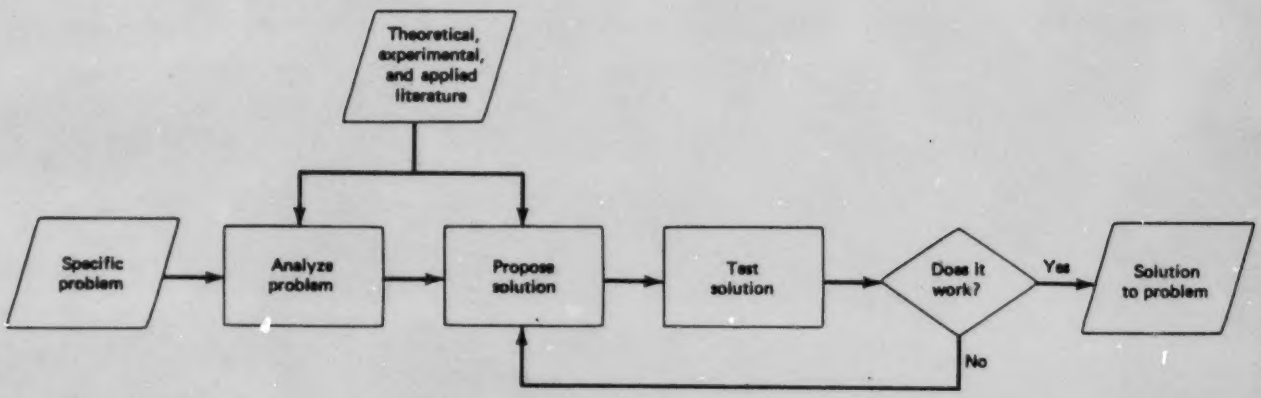

FIGURE 3. Program to Solve Problems

The primary input is a particular problem, identified and isolated by the previous program. We then analyze this specific problem with respect to existing theoretical, experimental, and applied literature. Based on this analysis, we propose a tentative solution. We then carry out a test of this solution. If it does not "work," we must propose new or different solutions and repeat the process until a solution is found.

This program is designed to solve a particular problem; thus, the principal product is problem-specific. Again, however, repeated applications of this program will result in important secondary products, such as new methods for analyzing and testing solutions and additions to the theoretical, experimental, and applied literature.

The program to evaluate guidelines

The remainder of the guidelines program consists of two basic activities: creating and evaluating guidelines. Figure 4 represents, in general form, the program by which a guideline or document could be evaluated.

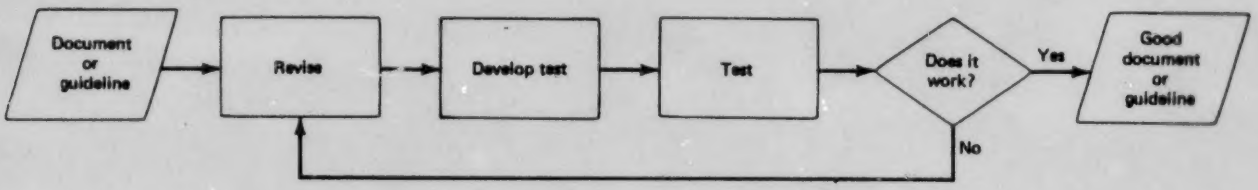

FIGURE 4. Program to Evaluate Document

As before, we first revise the document (using the guideline); then we develop and conduct a test. If the test proves unsuccessful, iterative revisions will be necessary until a "good" document or guideline is produced.

In the specific instance of evaluating a guideline, this program implies or assumes that we know enough about writers to generate a non-arbitrary guideline. In fact, a distinct program of research has developed during the course of the Document Design Project which looks at what writers and readers do.

The program to study what writers and readers do

A growing number of researchers in cognitive psychology and psycholinguistics are focusing their attention on writer and reader processes. Carnegie-Mellon University is at the forefront of these theoretical and applied advances. As part of the Document Design Project, these researchers have continued to analyze, develop, and test models of writer and reader processes. Particularly relevant to the guidelines program is work that they have done concerning writers' implementation of guidelines. CMU has produced several reports addressing this general issue.

The program to test methods

In all of these programs, we must develop new methods or adopt existing methods in order to generate specific information. For example, the program to identify problems requires a method or set of methods for analyzing documents, users, and producers. In most situations, finding an appropriate method is an important problem in its own right. Figure 5 represents the general sequence of activities necessary to address the problem of selecting and testing methods.

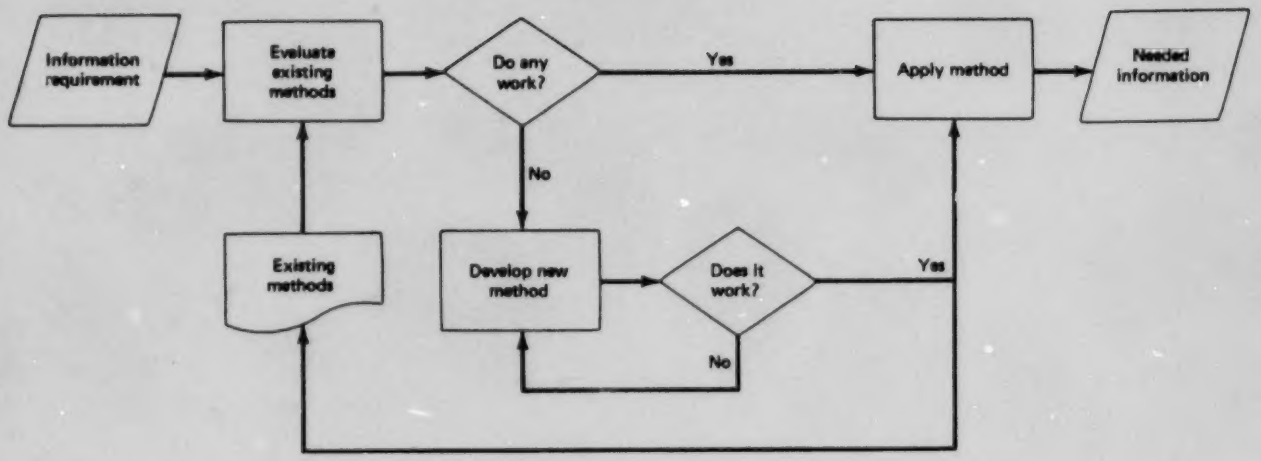

FIGURE 5. Program to Test Methods

Input to this program is the need for information. We first evaluate existing methods and techniques to see if they can gather the needed information. The program allows for developing new methods if existing ones do not "work" and for revising or adapting old ones. The two principal products of this program are, first, the specific required information; and second, a compilation and expansion of valuable methods and techniques.

In the course of the Document Design Project, we have worked on each of these "programs" as interesting research questions have arisen. As might be expected, many of the studies do not "fit" neatly or uniquely in a particular program; some address issues in several at once. Nevertheless, the conceptual

framework and the programs within it serve well as a heuristic device for organizing groups of studies. We will use them as a structure for presenting summaries of individual studies conducted by the Document Design Project.

Summaries of individual studies

The program to develop guidelines

As mentioned above, this program represents the general framework from which we derive the other programs. The two primary products associated exclusively with this program are also general. The first is a major review of the literature, and the second is a compilation of document design guidelines.

A major endeavor of the Document Design Project was to synthesize the literature in research disciplines that contribute to our knowledge of validated principles of document design. We completed a narrative literature review in April, 1980. Document Design: A review of the relevant research (D. Felker, ed.) is essentially a data base developed from existing literature. It includes chapters on:

- psycholinguistics,
- cognitive psychology,
- instructional research,
- readability,
- human factors, and
- typography.

In addition, there is a chapter in the form of a case study that illustrates the development of an actual document design experiment. The case study shows how research from different disciplines can be pulled together in examining a typical document design issue.

Within each discipline, we concentrated on studies that have direct relevance to designing public documents. We primarily considered research done with adult readers or learners (high school and above). We focused on research that involved meaningful prose of sentence length or greater. We stressed research that required memory, recall, and comprehension tasks because public documents require similar information procesing activities.

* * *

Guidelines for Document Designers (D. Felker, et al.), the second major product of this program, is a job aid for people who write as part of their jobs, but who are not professional writers. It presents twenty-five document design principles that can make public documents easier to read and use. Each principle is presented in the form of a guideline. The guideline explains the principle, gives examples and common-sense advice about applying it, relates it to other principles, and summarizes some of the research on it.

The guidelines are divided into four sections: organization, writing, typography, and graphics. The organizational guidelines discuss how to order paragraphs and sentences, how to show the document's organization to readers, and how to help readers find information in the document. The writing guidelines are about sentences: how to make the connections among information and ideas in them clear to readers, and how to avoid words and phrases that most readers have trouble understanding. The typographical guidelines explain some basic design principles that can make documents visually appealing, physically easier to read, and that help readers' understanding by physically illuminating the contents. The graphic guidelines present some alternatives to prose (illustrations, tables, charts, graphs) that help readers to understand quantitative and technical information.

Problem identification studies

One of the primary goals of our research effort has been to identify and isolate problems. We have approached this task from several directions, including theoretical analyses of language use, and laboratory and real-world experiments of document writers and users.

Theoretical analyses. In Linguistic theory and the study of legal and bureaucratic language (Technical Report #15), Veda Charrow examines aspects of linguistic theory in light of the real-world phenomena of legal and bureaucratic language. On the basis of experimental and practical studies by researchers in the Document Design Project and elsewhere, Charrow presents descriptions of legal and bureaucratic language. She discusses how four aspects of linguistic theory--historical linguistics, theories of grammar, sociolinguistic theories, and theories of language competence and performance (meta-theory)--have contributed to understanding language use in the real world of law and government.

Charrow's review of these major areas of linguistic theory reveals, however, that there are flaws and gaps in linguistic theory, which therefore cannot account for certain aspects of legal and bureaucratic language. She also points out areas where the study of real-world language can be used to find these gaps and flaws, and a few areas where an understanding of legal and bureaucratic language is potentially useful as a metric for choosing among competing linguistic theories.

* * *

In Strategies for understanding forms and other public documents (Technical Report #13), Melissa Holland and Janice Redish examine forms as discourse--in particular, how forms are similar to or different from other types of text. The authors present a model for "functional reading"--reading to learn or to act--that specifies the factors that are critical to understanding functional reading. The model is divided into three main factors--user characteristics, user behavior, and document characteristics. The area that they focus on is the middle box of the model: the processes and strategies that constitute the user's behavior with the document.

Holland and Redish then report on the preliminary results of a Document Design Project protocol study which looked at the strategies of forms users--a study of expert and novice forms users filling out the SF-171. From this study, they have been able to postulate three levels of strategies that people use to successfully fill out a form:

- decoding strategies, to figure out word meanings and to disambiguate sentences;
- form-using strategies, to relate items across the form or to draw on personal knowledge to clarify the meaning of an item; and
- global strategies, to put the document in a societal and institutional context.

The authors' interest is in strategies that experts use that novices do not. They suggest that the experts' successful strategies can be taught to less successful forms users. They also suggest that the results of this study can be used to generate principles for designing better forms.

* * *

A third primarily theoretical paper is The language of the bureaucracy (Technical Report #16), in which Janice Redish presents a linguistic analysis of the salient features that make bureaucratic prose so difficult for readers. This paper is also a synthesis of the findings from the Document Design Project's extensive experience in working with government documents and government writers. As such, it presents a sociolinguistic analysis of the environment in which government writers work. These two theoretical analyses--linguistic and sociolinguistic--lead to a better understanding of the problem of bureaucratese: Developing valid guidelines is necessary but not sufficient. We must also create a climate in which the bureaucracy wants to change. Redish suggests some reasons that might motivate government writers to apply the linguistic solutions that the Document Design Project has developed.

* * *

In Psycholinguistic alternatives to readability formulas (Technical Report #12), Holland discusses the assumptions of readability formulas, and cites findings from psycholinguistic studies of how people understand and use language that cast doubt on readability assumptions. Holland then takes results from a range of studies in psycholinguistics and related areas--prose comprehension and memory, discourse analysis, sociolinguistics, and graphics in text--to suggest features beyond sentence length and word frequency that writers and designers may consider to improve their texts. The paper concludes with examples of studies of documents conducted by the Document Design Project that have considered several of these alternative features, such as using familiar text schemas, rhetorical cues, scenarios, and culture-specific word meanings. The studies show that when designers use these other features, they can do more to improve a document than they can when they only use a readability formula.

* * *

Laboratory and field studies. Technical Report No. 8, Translating the law into common language: A protocol study, by Bond, Hayes, and Flower of Carnegie-Mellon, explores the problem of clarifying government language. The authors interviewed government writers and observed them as they rewrote a portion of a Small Business Administration regulation so that it could be

understood by the general public. This document was chosen for revision because of its extreme difficulty. The writers were also questioned about the conditions under which they normally work.

When instructed to revise without limitation, most of the writers were able to produce a document which would be more understandable to the general public. Some of the writers, however, not only failed to make significant improvements in the document but apparently failed to perceive that the general public might have difficulty in understanding the document. Interviews revealed that the documents produced by federal agencies are the product of many hands and may be reviewed by as many as 25 or 30 different individuals.

The authors concluded that one factor contributing to the difficulty of government documents may be the failure of some government writers to perceive the needs of the general audience. However, because government documents are typically written and reviewed by many people, it is unlikely that training of individual writers will have much effect on the quality of government writing. Instead, to be effective, document designers must take a systems approach and attempt agency-wide changes in the procedures for document production and review.

* * *

An unpublished project conducted by the Document Design Project staff examined the Hispanic community centering around the Adams-Morgan - Mt. Pleasant area of Washington, D.C. We looked at the problems that forms create for many Spanish speakers and the ways that the community has evolved for coping with these problems. Information in this study came from interviews with social service workers, volunteers in community centers, and, in some cases, from the clients themselves. Data also came from videotaped interactions of volunteers helping Spanish-speaking clients complete income tax forms and from participant observations over an extended period in a community center and a local store where members of the community also sought help with forms.

This study found that

- forms often demand inferential and decision-making skills beyond a school-based concept of functional literacy;
- forms often demand behaviors (e.g., keeping records) that may not have been traditionally part of the culture;
- forms often demand information (e.g., names and addresses of all employers in the last five years) that many people in the community cannot easily obtain; and

- forms are often so poorly organized and so poorly worded that anyone (including a native speaker of English) who does not know what the agency wants would have trouble filling them out.

Communities, such as this one, where many individuals cannot deal with the forms themselves, develop coping mechanisms in keeping with the underlying culture. In this Hispanic community, for example, relying on a cultural tradition of assigning helping roles as if in an extended family, specific people are known and sought out as experts in one or another agency or document (for example, the storekeeper to whom even people who have moved out of the community still come for help in filling out tax forms). Blanca Rosa Rodriguez reported on this study at the 1979 meeting of the American Anthropology Association and the 1980 meetings of the American Educational Research Association and the National Association of Bilingual Education.

* * *

In another unpublished study, using the federal government's job application (SF-171) as the stimulus, we have been looking at the different strategies that "experts" and "novices" use to fill out a complex document. We collected thinking-aloud protocols from 20 subjects who differ in level of education, amount of work experience, and level of proficiency in English. Although the form exists only in English, Spanish-speaking subjects gave their

protocols in Spanish and the bilingual experimenter translated these protocols into English.

In this study, we were particularly interested in problems identified by any of the users and in the strategies that "experts" use that "novices" didn't use. (Note that we identified a subject as expert or novice, not on the basis of the protocol, but by an independent judgment of how completely and how well the form was filled out.)

Our results elucidate the mismatch between the way many readers approach forms and the way the form is designed. The results could be used both to develop curricula to teach people how to deal with forms and to develop guidelines to tell forms designers how to make forms easier for users.

We describe this study and our initial hypotheses in Technical Report #13. A final report including results of the protocol analyses and implications for educators and document designers will be available soon from the Document Design Center.

* * *

A final study concerned with identifying problems is Problems in public documents (Information Design Journal, in press) by Andrew Rose. This study was concerned with identifying difficult public documents and analyzing the problems in those

documents. In this research, we first identified and gathered more than 500 documents that exemplify the categories of documents that people confront during their lifetime from birth to death. We then selected a group of 54 documents for further study on the bases of the size of the population affected, the criticality of the document, and the estimated frequency of use.

We analyzed these documents in several ways. For example, we had the documents rated for difficulty by 17 people including both experts and non-experts. We then analyzed the problems in the corpus of the 54 documents. Each document was analyzed for problem identification in three ways. First, using the same techniques that we apply when we critique a document for a technical assistance client, we looked at content, organization, language, and format. Second, we compared the document to our set of assertions about good document design. Third, we conducted an "information-processing" analysis of each document. We specified the information requirements, cognitive processing demands, and output requirements.

These analyses served to identify problems, to test the completeness of our set of assertions, and to generate hypotheses as to causes of difficulty and their solutions. The results of these various problem identification studies reveal the principal cause of problems: writers do not consider the document from the

user's perspective. The purpose of the document, the processes necessary to use a document, and the user's capabilities and limitations are all related to document difficulty. Problems occur when the demands of a document exceed the abilities of the audience. They occur when the document requires information and information-processing strategies that users do not possess. They occur when there is a mismatch between writers' and users' purposes and expectations. And they occur when the writers do not make use of feedback from actual users.

The program to solve problems

The Document Design Project's research efforts in this program consist of several laboratory and field experiments concerned with the elaboration of some specific document design problems.

In Technical Report No. 9, How headings in documents can mislead readers, Swarts, Flower, and Hayes explore the use of headings in public documents and provide guidelines for writers in the use of headings. In Experiment #1, five subjects listened to the headings of three documents and tried to predict the contents of the sections of text corresponding to the headings. In Experiment #2, five subjects tried to match sentences taken

from sections of the three texts with the headings of the sections. Some of the headings were not helpful to readers, and some actually misinformed them.

In the worst of the three documents, subjects failed to predict the contents of any of the sections, and matched only 10% of the sentences to the appropriate sections. A revised document showed significant improvement.

The primary implication for document designers is that headings can assist a reader to find information in a text, but in many texts they fail to serve that function. Guidelines are provided to help writers write useful headings.

* * *

The purpose of A study of the effect of headings in product warranties (Technical Report #6, by Charrow and Redish) was to discover whether well-written headings in warranties would increase the subjects' speed and accuracy in understanding the terms of the warranties. We were also interested in whether the subjects would prefer warranties with headings to those without.

Forty-eight subjects participated. Thirty-six were recruited at a shopping mall and 12 came to our office in response to a newspaper ad. The subjects were randomly divided into two groups and were tested in a one-one-one situation.

Materials were eight warranties for television sets, designed as follows:

- four different warranties in plain English;
- four counterparts to the first four warranties, differing from them only in the inclusion of a standard set of headings.

Group A received four of the plain English warranties, two with headings and two without, in counterbalanced orders.

Group B received the other four plain English warranties, two with headings, two without.

Subjects were required to read a warranty through, and use it to answer 12 questions regarding the terms of the warranty. They then did the same with the remaining warranties.

Results showed no significant differences in speed or accuracy between warranties with and without headings, although there was a trend in the accuracy data favoring the warranties with headings. However, when subjects were asked which warranty they thought was easiest to read and understand, 90 percent chose one or both of the plain English warranties with headings. Subjects also indicated overwhelmingly that they would be more likely to pay attention to and keep warranties with headings like the ones we had supplied.

* * *

Holland, Rose, and Cox initiated a series of experiments on how people follow conditional instructions. Conditional instructions take the form, "If X, then do Y," as in the example below:

> "If you are male or not a parent, and a veteran or a homeowner, then do Y."

This series of experiments was stimulated by our observation that some of the hardest instructions to understand in public documents are those in conditional form. We were also motivated by data from agencies like the IRS, which show high error rates on tax forms where conditional instructions occur.

The experiments in this series were designed first to analyze and measure the problems conditional instructions seemed to present, and second, to explore solutions to those problems. We assumed that the difficulties we had observed in conditional instructions arise when the antecedent ("if" part) of the instruction becomes long and complicated. We focused on the complexity of the logical structure--that is, how the categories of the antecedent, such as "male" and "parent," are linked together. The basic logical links are "and," "or," and "not."

To focus on logical structure, we used very simple categories, like "male," "parent," etc., that referred to the reader, as in the example above. The experimental task for our subjects was to read the antecedent and decide wheter it was true or false with respect to themselves. In each experiment, the subjects were scored as to how quickly and how accurately they responded to each instruction.

In Following instructions (Technical Report #4), Rose and Cox explored the difficulties inherent in the logical structures of conditional instructions with only two categories. The authors exhaustively sampled the entire set of instructions that can be formed using two categories and the logical links "and," "or," and "not." The instructions ranged in complexity from single-category examples to complex negative groupings (e.g., "If you are not both male and married ...").

Results showed marked differences among the types of instructions. Some logical structures were systematically harder than others on both speed and accuracy measures. Thus, structures with "or" were harder than those with "and." Structures with "not" were harder than affirmative structures. Structures with negative groupings (e.g., "not either/or," "not both/and") were harder than structures with single negative categories (e.g., "not A and not B").

In addition to providing theoretically useful information, this study had some directly applicable outcomes. A "logical dictionary of equivalences" was generated, which provides alternate, equivalent ways to present difficult logical forms. For example, "neither A nor B" can be rewritten as "not A and not B." The latter version was found to be easier in this study.

In Understanding instructions with complex conditions (Technical Report #5), Holland and Rose expanded the range of instructions explored in the previous experiment. They sampled conditional instructions with more categories and more kinds of structures. The instructions were formed by systematically varying five dimensions predicted to affect the complexity of the antecedent:

(1) the number of categories (from 4 to 7);
(2) the overall organization of the categories
- strings ("A and B and C")
- simple groupings ("A, and B or C")
- negative groupings ("A, and not either B or C")

(3) the logical link ("and" or "or")
(4) affirmative or negative categories ("A" or "not A")
(5) the implicit (comma) vs. explicit (word) expression of the "and-or" links ("A, B, and C" vs. "A and B and C").

Results showed that sentence difficulty varied as a function of the experimental dimensions. The difficulty was reflected in both time and errors. Predictably, performance suffered as more categories were added. Also, sentences with negative categories

were harder than sentences without; "or" was harder than "and"; and strings were easiest and negative groupings were hardest. The results confirmed the results observed in the Cox and Rose experiment.

From these results, the authors were able to draw important theoretical implications for models of sentence comprehension. They also gathered practical information on what types of conditional instructions cause problems for readers. This information was essential in designing the third experiment, which attempted to find ways to make difficult instructions easier.

The third experiment, A comparison of prose and algorithms for presenting complex instructions (Technical Report #17, Holland and Rose), compared subjects' performance on prose and algorithm formats for a sample of the most difficult instructions presented in the preceding study. The experimental question was whether algorithms could reduce the delays and errors found earlier.

An algorithm breaks up an instruction into its simplest steps and lays the steps out in a logical sequence. If readers follow this sequence, they do not have to worry about grasping the logical links or the structure of the instruction. Two forms of algorithms were used in this experiment: flowcharts, which are

a sequence of steps in boxes, with arrows to direct the reader between boxes; and "go to" questions, which are a list of steps or questions, with verbal commands to direct the reader between questions.

Results showed that both forms of algorithms reduced the delays and virtually eliminated the errors found in the difficult prose instructions. However, results also revealed two disadvantages of algorithms. First, for the prose instructions with easy structures, such as "and" strings, algorithms did not improve performance and in some cases slowed subjects down. Second, most subjects were confused the first two times they were presented an instruction in either flowchart or "go to" form. These subjects had long delays and made errors on their first responses to algorithms.

The authors concluded that algorithms can alleviate most of the problems readers have with logically complex conditional instructions, but that readers probably need a brief introduction telling them how to use an algorithm. This study found that, once subjects were used to the algorithms, most of them preferred the new formats to prose.

The program to evaluate documents and guidelines

The research conducted in this program consists of two "case studies" of actual documents (Technical Reports #2 and #11), and a study of expert and novice writers preparing a public document.

In Technical Report #2, Evaluating documents: The case of patient package inserts, Robert Krug examines the meaning of evaluation in the language simplification movement. Using the patient package insert (PPI) as an example, Krug draws a map (rationale) of what should happen if the document is received, read, understood, and used as intended. The PPI (an information sheet consumers now receive for certain prescription drugs) is a cogent example because the Food and Drug Administration (FDA) has proposed regulations that will require PPIs for most drugs; and the FDA will be interested in evaluating PPIs.

After presenting the ideal sequence of events, Krug shows how the rationale can break down at each point (e.g., the PPI is received and read but not understood). He points out that evaluation is necessary at each step but that only at certain points is failure or success attributable to the PPI. Furthermore, not all problems uncovered by the rationale can be solved by better documents. Readability formulas, even comprehension tests, are incomplete measures of how well a document has been written. Behavioral measures and an

understanding of the impact of the system in which the document functions are also critical.

* * *

A "direct" document evaluation was conducted by Felker and Rose in The evaluation of a public document: The case of FCC'S Marine Radio rules for recreational boaters (Technical Report #11). The Federal Communications Commission revised its marine radio rules for recreational boaters by writing it in plain English and by incorporating various document design principles. The revised rules were evaluated in a 2 X 2 factorial analysis of variance. One hundred five subjects (formed into experienced and non-experienced boater groups) were compared on how well they used and understood the original and revised rules.

Groups using the revised rules were significantly better in identifying the proper rules. In answering questions about the rules, they took less time to answer questions. They also rated the revised rules as easier to use. The authors used these results to discuss some general issues regarding the conduct of empirical evaluations of public documents.

* * *

Technical Report No. 3, Addressing an audience: A study of expert-novice differences in writing (Atlas), compared the skills of expert and novice writers in taking the needs of an audience into account in a knowledge controlled task.

In Experiment 1, ten competent writers and 20 novice writers (community college basic writers) were thoroughly briefed on an imaginary situation (plans for a transportation system for the handicapped) and were then asked to write a reply to a letter from a handicapped person about the system. Results showed that the competent writers were much more likely to address their readers' concerns than were the novices.

In Experiment 2, thirty novice writers were given the same tasks as in Experiment 1, but in addition they were asked to fill out a questionnaire designed to focus the writer's attention on the reader's need. The results demonstrated that only 16 of the 30 novices showed a clear understanding of their relationship to the reader; thus, many of the novices had difficulty in understanding the task. Of the 16 who did understand, although 13 explicitly recognized the needs of the audience in their questionnaires, only four addressed these concerns in their letters. Thus, novice writers may know the needs of the reader, but not use that knowledge when writing.

Experiment 3 had thirty-six novice writers who were given the same task as in Experiment 1, but, in addition, after finishing their first letter, they were asked to reply to a second letter which acknowledged their previous letter and made more specific complaints than the first letter. In replying to the more specific demands of the second letter, up to 80% of the novices responded to their readers' needs in their writing. Thus, the novice writers were not really insensitive to the audience, but rather appeared to define the writing task differently than did the competent writers.

Atlas concluded that novice writers and writers with little educational experience may define writing tasks differently than do more experienced or better educated writers. Document designers should be aware that such differences may influence the way different social groups use documents which require them to write, e.g., application forms.

The program to study writers and readers

Most of the work done in this program was conducted at Carnegie-Mellon University. Details of the major studies follow.

Technical Report #1 is, in fact, three papers all concerned with a model of the composing process. The first paper is

Identifying the organization of writing processes (Hayes & Flower). The major purposes of this paper were: 1) To reveal major writing processes and their organization through protocol analysis of writers while they are composing; 2) to propose a process model of composing. The primary source of data was a thinking aloud protocol of a writer composing an expository essay.

Three major writing processes were identified: Planning--setting goals and establishing a writing plan to guide the production of a text which will met those goals; Translating--producing language corresponding to information in the writer's memory; and Reviewing--reading and editing the text to improve its quality. Planning was seen to consist of three subprocesses: Generating ideas, organizing, and goal setting. Hayes and Flower present models for each of these processes and subprocesses together with a model of how the different processes interact in an overall writing process.

The authors concluded that we have to understand the writing process in order to understand how to produce and revise written documents. A model of written composition can help us in diagnosing writing difficulties and in developing training procedures for both writers and rewriters.

The second paper is The dynamics of composing: Making plans and juggling constraints (Flower & Hayes). This paper characterized writing as a process of handling multiple constraints rather than as a sequence of distinct stages. It also proposed effective strategies for handling multiple constraints. The data were two protocols of writers composing expository essays.

The process of juggling constraints was illustrated in detail and a taxonomy of writing plans was presented. Plans to do (rhetorical plans) were seen to include as subplans, plans to say (outlining the final product) and plans to compose (invention). This paper lists five practical strategies by which a writer can reduce the difficulty of handling constraints in writing.

The third paper is Writing as problem solving (Hayes & Flower). The purposes of this paper were 1) To describe a procedure for conducting research on composing processes; and 2) to outline major results of protocol analysis research on writing.

The authors concluded that writing is goal directed. Understanding the writer's plans and goals is essential to understanding the writing process. Furthermore, writing processes are hierarchically organized. Each process may have

several levels of subprocesses which support it. Also, some writing processes may interrupt other processes over which they have priority. For example, editing and idea generation frequently interrupt ongoing translation processes. Finally, writing may be organized recursively. For example, the revising process may make use of the whole writing process to improve a faulty transition in an essay. Writing goals may be modified as writing proceeds. The act of writing may help writers to recognize what they really ought to be writing about.

* * *

In Technical Report #10, Revising functional documents: The scenario principle, Flower, Hayes, and Swarts explored the needs of readers who are trying to understand a complex document. The data were reading aloud protocols collected from three people who were trying to understand a section of a Small Business Administration regulation. All three had considerable experience in business.

Results showed that in attempting to understand the document, all subjects made use of "scenarios." That is, they interpreted the meaning of a passage by inventing a condition/action sequence or a dramatized scenario in which someone does something. Between 37% and 64% of the subjects' statements about the content of the regulation involved scenarios.

The primary implications for document design are: It is important for the document designer to understand the processes by which readers attempt to understand documents. The "scenario principle" is a powerful new tool to help writers revise documents for clarity.

* * *

Technical Report #14, Editing for comprehension: Improving the process through reading protocols (Swaney, Janik, Bond, & Hayes) explored the use of reading protocols as an aid in editing for clarity.

Experiment #1 used four expert editors alternating between working individually and as a group to revise four public documents for clarity. Twenty-four subjects studied two of the original and two of the revised documents and answered questions about the content of each document, with the document present.

Two of the documents showed significant improvement in clarity as a result of revision, one showed non-significant improvement, and one appeared to get worse.

In Experiment #2, protocols were collected from 12 subjects reading and trying to understand versions of the document which appeared to get worse on the revision in Experiment #1.

The reading protocols revealed a number of difficulties which subjects experienced in trying to comprehend the text. These included:

1. the need for specific examples to illustrate the content;
2. the lack of relevant knowledge;
3. the failure to draw important inferences;
4. the failure to attend to necessary information;
5. vocabulary problems; and
6. problems in interpreting text structure.

In Experiment #3, a new revision was prepared which addressed the problems shown by the protocols in Experiment #2. Twelve new subjects were used in a retest. Results showed that the new revision was significantly clearer than either the original document or the first revision reported in Experiment #1.

The major implications for document design are that reading protocols provide a very powerful tool to aid in editing for clarity. They may also be useful in training editors and in developing document design principles, since they provide very clear information about readers' needs.

* * *

In an unpublished technical report entitled Comprehension strategies in reading, Hayes and Flower identified strategies readers use to understand difficult texts. Thinking aloud reading protocols were collected from five computer experts and five novices reading the first ten pages of a SNOBOL-4 programming manual and from five statistics novices reading an elementary chapter on probabilities.

Subjects exhibited a number of comprehension strategies in reading the text, including the following:

1. using text structure;
2. applying previously acquired schemas;
3. matching principles and examples;
4. searching for articulatory codes for new symbols; and
5. actively monitoring their own understanding of the text.

There was considerable consistency among subjects in the range of strategies which they employed and in the places in the text at which they employed them.

The major implication for document design is that knowing readers' strategies for comprehending difficult texts can help document designers to provide document users with the information they need in the form in which they need it.

The program to evaluate methods

As mentioned in the first section of this chapter, most of the studies described here have made use of this "methods" program. We believe that during the course of the Document Design Project significant progress has been made with respect to the research "tools" used. One of the major challenges involved in the design and conduct of our research program was to find the best research techniques to use. Research paradigms serve as the definers of a subject area almost as much as specific content. We have been fortunate in that the Document Design Project has been underway during a time of exciting advances and improvements in traditional research techniques. We have been able to incorporate several of these newer techniques in our research program.

Many of these techniques have been discussed during the above summaries. One of particular note is represented by Technical Report No. 7, A computerized reference library using ZOG (Gregg & Hannah). The purpose of this effort was to explore the application of computer technology--the ZOG system--to an information retrieval problem (finding information in a library).

An experimental ZOG library has been established at CMU with a data base of information about document design. The information is stored in the form of a large network. The

library user works at a high speed video computer terminal. The ZOG system affords the user 1) rapid response, and 2) a menu selection procedure for moving easily through the information network. Information in the library can be accessed by author's name, by discipline, by type of document studied, and by document design principle.

The ZOG library reflects the technological advance which has extended the concept of document from printed paper to computer generated displays on video screens. The potential impact of these developments makes it imperative that the document design field keep pace with technology through studies such as this one.

* * *

Finally, an unpublished technical report entitled A Protocol analysis primer: Collecting and analyzing reading and writing protocols (Bond & Hayes) provides an introduction to the collection and analysis of reading and writing protocols. This report discusses the purpose of protocol analysis for research and application and provides a detailed, practical introduction to procedures for collecting both reading and writing protocols. Suggestions for analyzing protocols together with worked-out examples are provided.

Protocol analysis has proved to be a powerful tool for both research and application in document design. Unfortunately relatively few researchers are familiar with the technique. This report provides a starting place for those who would like to use the technique.

3. The Technical Assistance and Training Component

The three components of the Document Design Project--research, technical assistance and training, and curriculum development--have been highly interactive, with the technical assistance component as the focal point of the interaction. By allowing us to work with document designers on the job, NIE gave us the real world as a laboratory.

Because we were able to offer government writers, forms designers, and managers help with their problems, they, in turn, allowed us to analyze documents in context, to learn about the multiple audiences and uses most documents must serve, and to observe the constraints on carrying out plain English projects. Through the technical assistance component, we gained access to documents and users for trying out the guidelines suggested by the research and for testing methods of teaching and evaluating documents.

The technical assistance component also kept the research focused on practical issues. Even our most esoteric series of research studies, the set of stimulus-reaction time experiments on complex conditionals, was developed from a realistic problem identified in analyzing users' problems with real documents. If the experiments had been derived solely from previous research, they would never have treated conditionals as complex as the ones

we studied. The complexity exists in the documents; the problem was real for some of our technical assistance clients.

The two research studies that took us to the final steps in our research sequence were, in reality, technical assistance projects. These were: a methodological investigation of how to evaluate a patient package insert (Technical Report #2) and a full-scale empirical evaluation of a revised regulation (Technical Report #11). The line between technical assistance and research was blurred.

Because of the technical assistance component, we were able to study not only the cognitive processing and linguistic problems in documents (which we could have and did sometimes study in isolation), but also the sociolinguistic context of document design. In the real-world as laboratory, we have built up case studies of the nature and function of writing in the bureaucracy (synthesized in Technical Report #15 and in many of our papers and presentations).

Our experiences in the technical assistance component also influenced the curriculum that we developed. Instructors who use our material will not only teach their students how to write clear, direct English; they will (at least try to) prepare their students for the variety of writing they will do, for the extensive review process they will meet, and for the attitudes toward clear English they can expect to find on the job.

We also tried out the process model of document design, which we use as a framework for our composition course, and the guidelines that we teach in our composition course, with our technical assistance clients. Although our workshops and assistance projects were not a controlled experiment for testing whether writers can use our guidelines, they were case studies. Our choice of guidelines to include in the book, Guidelines for Document Designers, and our statement of the guidelines (the level of detail, the examples, and the points we emphasize in each) draw heavily on our experiences in technical assistance and training.

Our credibility with educators, in fact, rests largely on the technical assistance component. Teachers of advanced composition who are interested in our course believe we have something unique to offer not only because of the research we are doing, but also (and perhaps mostly) because "we have been there," working in the environment for which they are preparing their students. Indeed, our technical assistance and training projects (and the guidelines and model documents that have come from them) are primarily responsible for the attention that the Document Design Project has received from the media and from the practitioners and educators who are the audiences for our findings. We are credible to these groups because we have brought research into practice; that is, because, in part, our research has been to study what happens in practice.

During the three years of the Document Design Project, we

- helped writers, designers, and managers in 19 Federal and local agencies in 35 technical assistance projects;
- developed a three-day course in Simplifying Documents and trained 42 writers from 15 agencies;

and

- developed a three-hour Workshop for Managers and trained 70 executive-level supervisors from four Federal agencies.

Many of the 35 projects were long-term interactions in which we worked with lawyers, technical specialists, or forms designers over many months and many drafts to produce a new document that was both understandable to the users and acceptable to the agency. Not all of the 35 projects resulted in new documents, but even those that did not contributed to our understanding of the problems inherent in trying to change the way an organization or a profession writes.

Each of the technical assistance projects and the two sets of workshops are described in a separate report (Technical Asistance and Training from the Document Design Project. Final Report. Washington, DC: American Institutes for Research, November, 1981). Highlights of the technical assistance component are:

- model sections on information and instructions for financial aid forms,
- a new immigration form,
- model sections for income tax instructions,
- a model clear English regulation, for which the agency acknowledged the Document Design Project's assistance in the preamble,
- many examples of revised medical consent forms, and
- a case study of evaluating a revised regulation.

We include "before" and "after" examples from these projects in the report.

4. The New Undergraduate Curriculum to Improve the Teaching of Writing

We developed the curriculum in three steps.

1. In 1978-1979, we conducted an informal survey of college composition courses that prepare students for writing in their professions.

2. In 1980, we worked with four instructors at three universities to try out material for an undergraduate course.

3. In 1980-81, we wrote a course guide with text, examples, and exercises for instructors who want to teach an advanced composition course that focuses on transactional writing.*

Primary responsibility for this task was taken by the American Institutes for Research. Carnegie-Mellon University was a test site for trying out the curriculum. Alan Siegel of Siegel & Gale contributed material on graphic design to the curriculum and the course guide.

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*1) We have adopted the term "transactional" writing from Britton, et. al., The development of writing abilities. London: Macmillian Education, 1975. In Britton's terms, "transactional" writing is writing that gets the work of the world done.

2) The proposed effort also included a survey of writers in several government agencies and private firms. The purpose was to find out, from people who now hold the jobs to which undergraduates in our course would be likely to aspire, about their education in writing, the writing demands of their jobs, and the types of training they need. The information would have been useful both in designing a course that was responsive to identified writing demands and in designing better on-the-job training for people like the survey respondents. Unfortunately, OMB refused to allow the data collection necessary for this survey.

Surveying existing courses

The information about what is happening in undergraduate composition courses came from an informal network of contacts. Over the course of several months, we talked with approximately 60 people, including Federal program officers who fund writing programs, professors at colleges, junior colleges, and technical institutions, and heads of professional organizations of teachers and writers. The report of this survey is Redish and Racette, Teaching College Students How to Write: Training Opportunities for Document Designers. Washington, D.C.: American Insitutes for Research, November 1979.

To summarize our findings briefly: We found very few courses that focus on preparing students in non-technical fields to write effectively in their professions. Excellent programs exist in the field of technical writing, but the examples and assignments in these courses are inappropriate for students in non-technical fields.

We did find that, in the last ten years, there has been tremendous growth in the attention paid to composition in English courses. In Freshman courses, most colleges now focus on writing skills and not on literary criticism. Within the composition curriculum, there has also been a shift to focus on the process of writing rather than on the written product.

Interest in teaching composition beyond the Freshman level has also grown although advanced composition courses still do not share the prestige of literature courses, and proposals to conduct research in composition or to offer degrees in rhetoric often meet with stiff resistance from English Department faculty. An Association of Teachers of Advanced Composition was formed at the 1979 meeting of the 4Cs (Conference on College Composition and Communication), but "advanced composition" is still a title in search of a definition. Many different types of courses from literature-based essay courses to business writing to expository writing are called "advanced composition."

In seaching for courses that would be appropriate training for future document designers, we found two types of programs of particular interest. One is "writing-across-the-curriculum," a catch-all name to cover several approaches for drawing faculty from other departments into teaching writing, team-teaching with a writing teacher, or adding writing skills to the objectives of their own courses. Writing-across-the-curriculum projects may influence students to pay more attention to the role writing will play in their careers and therefore to want to improve their skills in transactional writing.

The second is a movement to require a writing course beyond Freshman composition. The University of Maryland now requires

all juniors to take an expository writing course. Options for fulfilling this requirement include courses in technical writing, courses in writing that focus on a single academic discipline, and courses in advanced expository writing. Many of the future lawyers, social scientists, and business people who will write public documents select this third option, for which there was, at the time of our survey, no appropriate syllabus or text.

Developing a new curriculum

From the results of our survey, we had identified the need for an advanced composition course that would help prepare future document designers by focusing on

- the process of writing
- writing for different audiences and different purposes
- revising documents
- organizing to make the reader's task as easy as possible
- writing clearly and directly to the reader, and
- attending to realistic rhetorical situations by having to assess the audience's needs and by evaluating documents in realistic situations.

In developing a curriculum to meet this need, we used, as a framework, the model of the steps in the writing process that AIR had introduced in the proposal for the Document Design Project

5. New Graduate Programs in Rhetoric and Writing at Carnegie-Mellon University

To assure that the work of the Document Design Project would continue beyond the funding that they could provide, NIE specified, as one task in the project, that we establish an interdisciplinary graduate program in research on document design. We accomplished this task: A set of new graduate programs is in place at Carnegie-Mellon University; a second entering class began their studies this September. On the following pages, Professors Richard Young and Erwin Steinberg of CMU describe the origins and status of the new graduate programs for which the NIE-funded Document Design Project was a major impetus.

A variety of stories in the mass media have raised concern about literacy in the United States, and particularly about people's ability to write: falling scores on the Scholastic Aptitude Tests, uneven performance at various age levels on the National Assessment Tests, an announcement by President Carter and various cabinet officers of programs to foster clear writing in government documents, a Plain English law in New York State and similar laws being considered by two dozen other states across the country, reports by colleges of the need to offer remedial courses in composition. The educational community has

responded to this "crisis" in several ways: at the pre-college level, a "back to basics" movement has begun; at the college level, new courses in composition and writing skills clinics have sprung up; and at the graduate level, new research and instructional programs have been proposed.

In the long run, the response at the graduate level will be most important. Systematic surveys of research in written communication indicate that English departments have failed in training competent researchers in this area. Writing, of course, will continue to be an art; but undergirding that art is skill, and that must be reduced to a science. When writing skill has been carefully analyzed and described, that information can be used in courses to train writing teachers.

Carnegie-Mellon University has taken the lead in such research. Cognitive psychologists and rhetoricians at CMU are leading in the attack on writing problems; and CMU has become a leader in making the results of such research known. In May of 1978, CMU ran a symposium in Cognitive Processes in Writing (see attachment A), the proceedings of which was published by Lawrence Erlbaum Co. (Lee W. Gregg and Erwin R. Steinberg, Eds., Cognitive Processes in Writing [1980]). The book has gone into a second printing.

Building on the base of its research, CMU's Department of English, with the help of the Department of Psychology, announced a new Ph.D. in Rhetoric to train the needed researchers (see attachment B). (Psychology is also training researchers from the cognitive psychology side; and the two departments have established a joint Interdisciplinary Doctorate in Document Design, to train researchers in the more practical aspects of writing problems--see attachment C).

CMU's Department of English also added a rhetoric track to its Doctor of Arts program, to train college teachers (as distinguished from researchers) of rhetoric and composition, and it completed work on a master's degree in Professional Writing.

The four new programs in English, then, form an interrelated and mutually supporting cluster:

Ph.D. in Rhetoric -- to train researchers in communications problems

Interdisciplinary Ph.D. -- to train researchers in applied communications problems

D.A. in Rhetoric -- to train college teachers of rhetoric and composition (see attachment D)

M.A. in Professional Writing -- to train professional writers (see attachment E)

The Ph.D. in Rhetoric at CMU is a distinctive degree, considerably different from other degrees with the same title.

It provides training in methodological approaches which, although considered to be critical to research and teaching, are not synthesized in other programs. The curriculum at Carnegie-Mellon University exposes students to issues in theory-construction throughout the discipline's history as well as contemporary developments in the "new rhetorics" of the twentieth century. Perspectives in theory development and problem-solving are conjoined with a variety of research approaches and projects, including humanistic and empirical methods, on-going research, and applied study through internships. It is the interrelationship of humanistic and social scientific approaches and theoretical and applied training which makes the Ph.D. in Rhetoric at CMU a program uniquely designed to solve a broad variety of communication problems in our society.

A grant of $60,000 from the Buhl Foundation provided vital support for the first two years of the new programs (1980-1981). Of primary importance in the grant were funds for graduate student support and for released time for faculty for retraining, program development, and proposal writing. That support enabled the university to establish a Communications Design Center in which faculty members from English, psychology, design, and computer science work with graduate students in the new program on a variety of theoretical and applied problems in document design (see attachment F).

In September of 1979, the Department of English added to its staff a specialist in the history of rhetoric and modern rhetorical theory, and spent the academic year 1979-80 planning the programs for the graduate students who would enter in the fall of 1980. One of the important problems was how to make the programs multidisciplinary--a problem by no means solved now and one which will continue to be worked at. Approximately one-third of the courses for the three programs were already being taught in the Departments of English, Psychology, Design, and Computer Science.

During that academic year, a good deal of time was also spent putting together an introductory course that would introduce new Ph.D. candidates to various aspects of research in document design (see attachment G: "Introduction to Research in Rhetorical Theory").

The English Department developed a more effective recruiting procedure than it had used in the past. This, as well as the inherent attractiveness of the new programs, made recruiting quite successful (see below). The new procedure entailed developing, with the help of the Document Design Project staff at CMU and AIR: 1) general and special mailing lists; 2) a variety of recruiting materials (posters with tear-off cards, monographs and articles suitable for use in recruiting, descriptions of the

various programs and the Document Design Project to be used for mailing and publication in journals, a new graduate catalogue, and a series of follow-up letters); and 3) a plan for orderly and repeated dissemination of information about the programs. The procedure was developed to the point where much of it can be routinely handled by a secretary. The materials continue to be revised, and a well-designed brochure will soon be printed.

The most effective recruiting, however, has been personal: interviews on campus and at conferences, conference papers that have attracted attention, the NEH seminars offered by Professor Young at the University of Michigan and at CMU, and referrals from faculty elsewhere familiar with the new programs.

The number and quality of applicants for the first class was gratifying, and the Graduate Committee for the Department of English spent the spring of 1979 doing the necessary admissions work. At the beginning of the fall semester of 1980, 25 graduate students were enrolled in the new programs, 15 full-time and 10 part-time.

Degree	No. of Candidates	Average GRE-V
M.A. in Professional Writing	9	617
D.A. in Rhetoric	8	634
Ph.D. in Rhetoric	8	690

(The 17 in the M.A. and Ph.D. programs were all new. In the D.A. program 3 were new, 5 had been enrolled in the D.A. program for a year or more.)

During the academic year 1980-81:

1) The Communications Design Center ran a "Symposium on Writing and Designing Documents: Research and Practical Solutions" (see attachment H);

2) The Department of English revised the new graduate programs; and

3) The Department of English continued recruitment and admissions procedures.

In the fall of 1981, the Department of English hired a specialist in contemporary rhetoric and a linguist with special competence in discourse analysis. Special committees continued to examine the programs for the Ph.D. and the D.A. New students entered the graduate program as follows:

Degree	No. of Candidates	Average GRE-V
M.A. in Professional Writing	6	605
D.A. in Rhetoric	2	660
Ph.D. in Rhetoric	4	653

Revisions of the new programs, which has been continuous, will probably go on for another year or so as experience accumulates. The graduate students are actively involved in

evaluating and helping to revise the programs; and new faculty bring new ideas. One might say, therefore, that while the new programs to train document designers have arrived, been made welcome, and have given every indication of being successful and permanent, they have not yet been seated.

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THE PHD IN RHETORIC AT CARNEGIE-MELLON UNIVERSITY

An Overview

The PhD in Rhetoric is focused on rhetorical theory--especially on theoretical explanations of how people produce and understand discourse. It is designed for students who want careers in rhetorical research and the teaching of rhetoric and composition in English departments and interdisciplinary programs. An option may be elected that prepares one for writing and applied research in government and business.

The curriculum offers a series of complementary approaches to rhetorical theory; it is made up of courses in 1) the history of rhetorical theories, 2) the development of new rhetorical theories, 3) the application of theories to practical problems, and 4) the evaluation of theories and their applications.

1. History: A comparative study of the major theories from Platonic rhetoric to the New Rhetoric of the twentieth century and the contexts in which the theories were developed. Comparative study provides a detailed knowledge of alternative theories of rhetoric (e.g., those of Aristotle, Cicero, Augustine, Campbell); and in doing so it also provides the foundation necessary for understanding recent developments in the discipline (e.g., the work of Burke and Perelman, speech act theory, tagmemic rhetoric). The study of contexts entails investigation of the situations and beliefs (social, political, psychological, philosophical, artistic) that help to shape rhetorical theory; it also entails an investigation of the ways in which rhetoric has, in turn, shaped its contexts.

2. Theory development: A study of how one develops explanatory principles in response to rhetorical problems. Course work includes investigation of current theoretical developments and opportunities to develop original theoretical responses to problems associated with producing and understanding discourse.

3. Application: Study of the uses of rhetorical theories for practical purposes--especially for producing effective discourse and for the critical reading of texts. One goal of the program is the ability to use theory to increase the effectiveness of

reading, writing and teaching. Courses in rhetorical criticism and internships in the teaching of writing are means to this end.

4. Evaluation: Study of methods for verifying and evaluating theories and their applications. This part of the program is devoted to study of appropriate ways of answering three questions: "Is it true?" "Does it work?" "Is it significant?" The methods are brought to bear on one's own work as well as the work of others. Courses present a variety of research methods, including formal empirical research; internships in the University's Center for Communications Design provide an opportunity to carry out extended research projects with the help of faculty from the Departments of English and Psychology.

* * * * *

Students in the program may undertake internships and research projects in communications design, i.e., in research devoted to the design and evaluation of communications used in government and business. Although this option is entirely appropriate for students who want careers in university teaching, it is intended primarily for those who want careers as researchers and consultants in government and business. Specialization is achieved through elective courses, an internship or research assistantship in the Center for Communications Design, and the dissertation. (For further information on this option, see the brochure entitled "Communications Design: An Interdisciplinary Doctorate in Document Design.")

For additional information write

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Pittsburgh, PA 15213

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Attachment C

Communications Design: An Interdisciplinary Doctorate in Document Design

Carnegie-Mellon University College of Humanities and Social Sciences

Program of Study. Carnegie-Mellon University announces an interdisciplinary research and graduate program in writing and document design. This program will be available as an option for students pursuing doctoral degrees in the Departments of English or Psychology; these candidates will undertake internships and dissertations in CMU's *Communications Design Center.*

Applicants will be expected to meet the requirements of the department through which they enter. As part of the interdisciplinary program, they will participate in courses in four main areas: computer science, graphic design, rhetoric, and cognitive psychology. Programs of study will be individually planned to take into account each student's past education and experiences and his or her plans for the future.

Communications Design Center. The CDC was established to undertake basic research in communications problems in business and government. It will give graduate students and faculty practical experience in recognizing and solving a variety of communications problems through an interdisciplinary approach. One of the Center's unique features is the active participation of Siegel & Gale, a private communications consulting firm that has pioneered in the development of plain English legal contracts and has simplified government regulations, contracts, and forms.

The Center's interdisciplinary research program is dedicated to developing fundamental knowledge that can be applied profitably in a variety of situations in which communications problems occur. Of particular interest to the Center are such problems as determining ways of incorporating principles of good graphic design into reports and other communications; developing methods to teach managers in both the public and private sectors how to write in clear, effective language; employing concepts from linguistics, stylistics, and rhetoric to improve a broad variety of documents in the private and public sectors; determining the influence of word-processing equipment on writing methods; devising ways of using computer capabilities in solving communications problems.

Research Facilities. Research projects in the Communications Design Center will provide opportunities for internship and dissertations. Laboratory facilities are also available. There is a computer-controlled laboratory for cognitive studies and elementary information processing analyses. Terminals to the Computation Center's complex of computers are available in the Psychology Department and the Communications Design Center. Word-processing and text-editing systems are available. Students have access to the computers of the Department of Computer Science, including ARPA network connections and specialized systems for speech recognition and artificial intelligence.

Financial Aid. It is the University's policy that no student from the United States or Canada who is accepted for admission and is in good standing shall be prevented from attending Carnegie-Mellon because of financial need. To implement this policy, the University has a comprehensive financial aid program of fellowships, scholarships, and traineeships. Prospective and present students are also urged to apply for awards under national competitions.

Cost of Study. Graduate tuition for the 1980-81 academic year will be $5,500. Housing for graduate students is available on the campus. The Campus Housing Office also lists rooms and apartments in the University area for students who do not wish to use campus housing.

Student Group. Approximately eight new students are accepted into the program each year from degree candidates in the Departments of English and Psychology. Students in this program will be part of a much larger body of graduate students taking other programs in the three departments.

The Area. Carnegie-Mellon's 90-acre campus is in Pittsburgh's Oakland section. CMU is approximately 4 miles from the center of the city and adjacent to Schenley Park, a 500-acre recreation area that includes a golf course, tennis courts, and swimming pool. Chatham College and the University of Pittsburgh are within easy walking distance of CMU. A wide variety of cultural and recreational opportunities is available in Pittsburgh and the surrounding Pennsylvania hills.

The University. The major divisions of the University are the Graduate School of Industrial Administration, the Carnegie Institute of Technology, the Mellon Institute of Science, the School of Urban and Public Affairs, the College of Fine Arts, and the College of Humanities and Social Sciences. Approximately 5,500 students are currently enrolled in the University, of whom about 30 percent are in graduate programs. The teaching faculty has about 450 members, and approximately 150 additional scientists are on the research staff.

Applying. Applications for admission and financial assistance should be submitted by February 1. GRE aptitude scores are required. There is a $20 application fee. Applications are invited from students who plan careers in research or research-oriented positions in industry and government. The program is designed for students with undergraduate majors in computer science, English, linguistics, and psychology, but others who apply will be considered.

Additional information is available from:

Dr. Robert C. Slack
Graduate Program in English

Dr. Lee W. Gregg
Graduate Program in Psychology

Carnegie-Mellon University
Pittsburgh, Pennsylvania 15213

THE DOCTOR OF ARTS IN ENGLISH STUDIES AT CARNEGIE-MELLON UNIVERSITY

An Overview

The Doctor of Arts program prepares students for college teaching at the undergraduate level, for research designed to improve teaching, and for the development and evaluation of educational programs. A special interdisciplinary option prepares students for careers as directors of writing programs in business and government.

The Common Core: All students in the program share a common core of courses before they elect to concentrate in literary studies, rhetoric and composition, or creative writing. The common core offers instruction for effective undergraduate teaching; these include linguistics, literary criticism, classical rhetoric, approaches to composition, creative writing, curriculum design and program evaluation, methods of instruction, and research methods. The core courses, which constitute about one-third of the curriculum, prepare students for the more specialized concentrations.

The Disciplinary Concentrations: Students in the Literature Concentration take a series of seminars in major authors, genres and periods, with distribution requirements in English, American and world literature. Students in the Rhetoric and Composition Concentrations take courses in literature, professional writing, rhetorical theory, the history of rhetoric, and advanced courses in linguistics (e.g., stylistics, discourse analysis, history of the language). Students in the Creative Writing Concentration take courses in literature and a complementary series of writing workshops in various fictional genres.

Free Electives and Special Course Sequences: A substantial number of free electives enable students to tailor their education closely to their interests and professional goals. Students in the Literature and Creative Writing Concentrations may, if they choose, devote some of these electives to a sequence of courses in rhetoric and composition intended to prepare them to design and direct composition programs.

Students in the Rhetoric Concentration may, if they choose, devote electives to the Communication Design Option, a series of courses and internships for students who want careers as professional writers and directors of writing programs in business and government.

This Option provides instruction in the design and evaluation of communications used in business and government and in the development and administration of professional writing programs; it also provides experience in consulting on communication problems. Although the Option is entirely appropriate for students who want academic careers, it is intended primarily for those who seek non-academic careers in which they can pursue their interests in language, literature, and rhetoric. Specialization is achieved through 1) courses in visual design, computer studies, and quantitative methods; 2) internships in the Center for Communications Design, in government agencies, and in commercial organizations; and 3) the dissertation.

The Dissertation: The culmination of the Doctor of Arts program is the dissertation which enables students to pursue their professional interests in depth.

For additional information write

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THE MASTER'S PROGRAM IN PROFESSIONAL WRITING AT CARNEGIE-MELLON UNIVERSITY

An Overview

The Master's Program in Professional Writing is designed for students who want careers as writers in business and government.

Both business and government employ a substantial number of professional writers. They write regulations, brochures, forms, manuals for operating and repairing machines, public relations releases, in-house publications, and so on--in short, the kind of writing necessary for carrying on the day-to-day affairs of society. The Master's Program is designed to develop the abilities needed to carry out a wide range of writing assignments in the public and private sectors of society. It seeks to prepare the student for several possible points of entry into a professional writing career by developing an understanding of the most frequently occurring problems in professional communication and by developing theory-based analytical and problem-solving abilities that have wide application.

The Program requires three semesters of course work in the craft of writing, rhetorical theory, linguistics, visual design and computer technology. It also requires a summer internship in a government agency, consulting firm, corporation or other appropriate organization.

The Program is intended to develop several kinds of knowledge and skill.

- It develops further the writing and critical skills of students who are already competent in the fundamentals.
- It develops an understanding of rhetorical theories that offer explanations of the processes of composing and communication and, hence, provides the basis for carrying out these processes more effectively.
- It develops a greater understanding of the structure and variant forms of the English language.

- It develops a basic understanding of the principles and potentials of computers and other word-processing systems.
- It develops an understanding of the role of visual design in communication and a knowledge of the fundamentals of design.

The internship and a case-study course in professional writing provide students with opportunities to integrate and employ the knowledge and skills acquired in other parts of the Program.

Course Requirements

Writing (3 courses)
Technical Writing and Editing
Professional Writing
Writing Elective

Language and Linguistics (2 courses)
Introduction to Linguistic Analysis
And one of the following:
- History and Varieties of the English Language
- Stylistics
- Discourse Analysis

Computer Studies (1 course)
The Computer in Literary and Linguistic Studies (elected by students taking Stylistics)
Introduction to Computing A
Introduction to Computing B
(elected by students who want additional work in computer studies)

Rhetorical Theory (2 courses)
History of Rhetorical Theory I
History of Rhetorical Theory II
Contemporary Theories of Invention
Contemporary Rhetorical Theory

Visual Design (2 courses)
Fundamentals of Graphic Design
Visual Communication

Electives (2 courses)
Selected in consultation with advisor. Electives offer additional work in computer studies, design, writing, language studies, and critical analysis. Courses in science, technology and business administration may also be elected.

Internship
Normally taken in the summer prior to the third semester of the Program.

For additional information write or call

Pete Jones, Associate Head
Department of English
Carnegie-Mellon University
Pittsburgh, PA 15213
Phone: 412/578-2850

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Carnegie-Mellon University

News Service

Department of Public Relations
Schenley Park
Pittsburgh, Pennsylvania 15213
[412] 578-2900

CONTACT: Susan Case

For IMMEDIATE Release

CMU BEGINS COMMUNICATION DESIGN CENTER

Pittsburgh, Pa.--Carnegie-Mellon University has established a new center to study communication problems in business, industry and government.

The Communications Design Center will undertake the basic research necessary to develop methods of teaching managers in the public and private sectors how to write in clear, simple language; incorporate graphic design principles into reports and other communications to reach readers more effectively; and analyze the impact of computer word processors on writing methods, as well as study ways to capitalize on computer capabilities in communications problems.

"The Center will start with very practical problems, such as communicating financial information," says Erwin Steinberg, director of the Communication Design Center and professor of English and interdisciplinary studies at CMU. "From each specific communications problem, we hope to gain further insight into the writing process so that we can develop general principles that can be applied to different types of communications problems." Steinberg adds that today's computer word processors are creating some very difficult problems. "While some writers adjust quickly to computer word processors, others have extreme difficulty adapting to them," he continues. "We plan to undertake research in this area to help computer scientists develop systems that are more readily adaptable to writers."

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CDC--add 1

Alan Siegel, President of Siegel & Gale, a communications consulting firm in New York City that specializes in simplifying legal, quasi-legal and technical communications, has been named co-director of the Center. Other members of the Center include: Joseph M. Ballay, Associate Dean, College of Fine Arts and head of the design department; Lee W. Gregg, Associate Dean, Humanities and Social Sciences and head of the psychology department; Richard E. Young, head of the English department; and Thomas L. Boardman, director of the computation center.

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Carnegie-Mellon University has established a new Communications Design Center to undertake research in communication problems in business, industry, and government. The Center will also give graduate students and junior faculty practical experience in recognizing and solving communications problems from both the public and private sectors.

The Center will:

1. encourage interdisciplinary approaches to the solution of communications problems;
2. provide an organizational setting and resources for research in visual and verbal communications;
3. promote the development of educational materials for communications programs on and off the CMU campus;
4. give a focus to the variety of interests in communications among the academic and research units of the University;
5. forge a link between the research capabilities of the University and the practical problem-solving capabilities of a communications consulting firm;
6. provide greater national visibility for the work being done in communications design by CMU and the associated firms or cooperating institutions.

To determine which activities the Communications Design Center should undertake, we have chosen the following criteria:

1. problems which pose interdisciplinary research questions;
2. real-world problems that offer broad, basic opportunities for defining research subproblems;
3. problems the solution to which would in some sense be socially useful;
4. problems which can result in generalizable and exportable solutions.

Among the projects appropriate for the Center to consider are:

1. readability indices and other evaluative instruments for documents (letters, memos, reports, etc.);
2. teachable processes for simplifying written language and methods for evaluating the efficacy of such processes;
3. problem-solving methodologies for attacking communications problems;
4. methods for incorporating principles of graphic design in solving communications problems;
5. techniques to capitalize on computer capabilities in solving communications problems;
6. ways to apply the results of high technology research to practical communications problems;
7. methods of using word-processing computer technology in communications systems.

Director of the new Center is Erwin R. Steinberg, Professor of English and Interdisciplinary Studies, co-author of Communications in Business and Industry and for thirty years a communications consultant. Co-director is Alan Siegel, President of Siegel & Gale, a highly successful communication consulting firm in New York City specializing in the simplification of complex legal, quasi legal, and technical communications. Mr. Siegel is contributing his time to the Center.

Members of the Center's Board of Directors are:

Joseph M. Ballay -- Associate Dean, College of Fine Arts, and Department Head and Professor, Design

Lee W. Gregg -- Associate Dean, Humanities and Social Sciences, and Department Head and Professor, Psychology

Richard E. Young -- Department Head and Professor, English

Thomas L. Boardman -- Director, Computation Center

Course Calendar

INTRODUCTION TO RESEARCH IN RHETORICAL THEORY

(Class meets every Tuesday, 1-3:50, in the 4th Floor Seminar Room of the Hunt Library.)

Date	Topics	Faculty Members and Departments
Sept. 9	Research in Rhetoric The New Rhetoric	Enos (English) Young (English)
Sept. 16	Problems for Research Accessing Research in Rhetoric	Young (English) Rudman (English)
Sept. 23	Historical Developments in Modern Psychology (Information Processing Models; Skill Performance--the Quality and Structure of Knowledge); Creative Behavior	Hayes (Psychology)
Sept. 30	Problem Representation and Understanding Reading Research	Larkin (Psychology) Carpenter (Psychology)
Oct. 7	Influence; Impression Formation; Person Perception	Fiske (Psychology)
Oct. 14	Historical Research in Rhetoric	Enos, Wands (English)
Oct. 21	Research Methodology: A Cognitive Process Theory of Composing	Flower (English)
Oct. 28	Research on Rhetorical Adaptation Visual Communication	Kaufer (English) Ballay (Design)
Nov. 4	Argumentation in Public Formation	Larkey (Social Science)
Nov. 11	Numeracy; Probability and Belief	Kadane (Statistics)
Nov. 18	Logic, Argumentation, and Epistimology	Covey (Philosophy)

continued

Date	Topics	Faculty Members and Department
Nov. 25	Linguistics and Rhetorical Research	Olsen, Oster (English)
Dec. 2	Computer Technology: Applications to Rhetorical Research	Olsen, Rudman, Stuckey (Computer Science)
Dec. 9	Designing Programs of Research Prospectuses	Young (English) Enos (English)

Attachment H

Symposium on Writing and Designing Documents: Research and Practical Solutions

October 10-11, 1980

Mellon Institute
Carnegie-Mellon University
Pittsburgh, Pennsylvania

For:

Teachers of writing, teachers of design, document designers, professional and technical writers, cognitive psychologists, designers, and lawyers.

Communications Design Center
Carnegie-Mellon University
Schenley Park
Pittsburgh, Pennsylvania 15213

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Symposium on Writing and Designing Documents: Research and Practical Solutions

To be held at Carnegie-Mellon University, Mellon Institute Bldg., 4400 Fifth Avenue (between Dithridge and Bellefield Streets), Pittsburgh, Pennsylvania.

October 10-11, 1980 (Friday-Saturday)

Hotel accommodations may be arranged at the Crossgates Inn (412-683-6000) or Howard Johnson's (412-683-6100).

There is no charge for this seminar. We will reserve places for those who return the tear-off registration form.

Friday morning

9:00 **Opening**

9:30-12:00 **Basic Research**

Chair, Alan Siegel, Siegel & Gale

Editting for Won or Meny Errors
Jeanne A. Halpin
Department of Psychology
Carnegie-Mellon University

Written Communication at the Managerial and Technical Levels
Mildred S. Myers
Graduate School of Business
University of Pittsburgh

Formulating Sentences in Writing
John R. Hayes
Department of Psychology
Linda S. Flower
Department of English
Carnegie-Mellon University

Audience questions and answers

Friday afternoon

1:30-4:30 **Applied Research**

Chair, Fred Emery
Fred Emery Associates

Finding the Problems in Bureaucratic Documents
Veda Charrow and Janice Redish
American Institutes for Research

The Role of Experimentation in Document Design
Andrew Rose
American Institutes for Research

Revising a Government Document: The Case of the Medicaid Recertification Form
Melissa Holland
American Institutes for Research

Audience questions and answers

4:30-6:00 Cash Bar

Saturday morning

9:00-12:00 **Design Communication**

Chair, Joseph M. Ballay
Department of Design
Carnegie-Mellon University

The Changing Face of Paperwork
Alvin Eisenman
Graphic Design Department
Yale University

Simple by Design
Don Ervin, Creative Director
Siegel & Gale

The British Experience—Case Histories and Forms Design
H.K. Henrion
Henrion Design Associates (London)

Audience questions and answers

Saturday afternoon

1:30-4:30 **Legal Communication**

Chair, Erwin R. Steinberg
Communications Design Center
Carnegie-Mellon University

The Plain English Movement
Alan Siegel
Siegel & Gale

Simplification of Consumer Contracts—Protecting Consumers from Overexposure and Gobbledygook
Jeffrey Davis
New York University Law School

Simplifying Public Documents
Ken Morris
Siegel & Gale

Audience questions and answers

6. Disseminating Information about the Document Design Project's Work

We know from a study that AIR recently did for the Administration on Aging that projects that have a major impact do not rely on their final reports to influence the work of others in their own or related fields.* Projects that have strongly influenced practice or other research are characterized by active dissemination in a variety of media. In highly influential projects, the researchers have disseminated information about the findings and the applications of the project at conferences and in personal interactions during as well as after the project. They have also published articles in professional journals and have developed handbooks and other material that is readily accessible to practitioners.

If one criterion of a project's success is the extent to which its work has been disseminated, the Document Design Project has been phenomenally successful. We talked about the Document Design Project's work in more than 150 invited and refereed papers at professional meetings of research and practitioners' organizations. We gave full-session symposia at three major

*Peterson & Leinbach, The products and uses of research sponsored by the Administraton on Aging. Washington, DC: American Institutes for Research (Gerontological Research Institute), July 1981.

annual meetings (APA, AERA, CCCC). Thirty-six papers and books by Document Design Project staff have been published or accepted for publication. Newspapers and radio shows have become excited about the project. An article about the Document Design Center in which NIE and the DDP are cited appeared in the New York Times, October 29, 1981. (Warren Weaver, Jr., "Tackling the U.S. Jargon Juggernaut", Washington Talk, p. A24). This article was reprinted in newspapers throughout the United States and in the International Herald-Tribune (Paris, France).

The project's work is being used by other researchers who cite Document Design Project material. From all of these sources and from interactions at numerous conferences, we have developed a wide network of people who know about the Document Design Project and who, in turn, tell others. At the Document Design Center at AIR, we receive about 35 inquiries a week by letter or phone about our work.

In Appendix A, we list all of the dissemination activities of the Document Design Project.

7. Continuing the Work of the Document Design Project

The impact of the Document Design Project will continue beyond the end of the NIE-funded work. For example, the Document Design Project's graduate curriculum has been institutionalized at Carnegie-Mellon University, where the Communications Design Center has been set up to receive and distribute funds for research assistantships and internships for graduate students.

Siegel & Gale continues to provide writing and design services to public and private clients. Since 1979, Siegel & Gale has been conducting a project for the Internal Revenue Service in which they have been developing experimental clear English versions of tax forms.

In the second year of the Document Design Project, AIR established the Document Design Center to house the project and related efforts. The Document Design Center will continue to publish its monthly newsletter, Simply Stated, which is available free to interested researchers, teachers, and practitioners. Simply Stated now reaches more than 3,000 people every month. Articles from Simply Stated and entire issues have been reprinted in other newsletters and journals, for example, in the Journal of Business Communication (Fall 1981) and in a forthcoming issue of the newsletter of the Professional Communication Society (under

the auspices of the Institute of Electrical and Electronic Engineers). The Document Design Center also continues to conduct research, to assist government agencies and private firms in simplifying documents, to provide training, and to develop curricula in related fields such as legal writing and forms design.

APPENDIX A

Technical Reports
Publications
Articles about the Document Design Project
Presentations by Document Design Project Staff

Technical Reports of the Document Design Project

ERIC No.	No.	Author(s)	Title	Issued by	Date
	1	Flower & Hayes	A Process Model of Composition	CMU	August 1979
ED192337	2	Krug	Evaluating Documents: The Case of Patient Package Inserts	AIR	November 1979
ED192338	3	Atlas	Addressing an Audience: A Study of Expert-Novice Differences in Writing	CMU	December 1979
ED192339	4	Rose & Cox	Following Instructions	AIR	February 1980
ED192340	5	Holland & Rose	Understanding Instructions with Complex Conditions	AIR	February 1980
ED192341	6	Charrow & Redish	A Study of Standardized Headings for Warranties	AIR	February 1980
ED192342	7	Gregg & Hannah	A Computerized Reference Library Using ZOG	CMU	March 1980
ED192343	8	Bond, Hayes & Flower	Translating the Law Into Common Language: A Protocol Study	CMU	April 1980
ED192344	9	Swarts, Flower & Hayes	How Headings in Documents Can Mislead Readers	CMU	April 1980
ED192345	10	Flower, Hayes & Swarts	Revising Functional Documents: The Scenario Principle	CMU	March 1980

ERIC No.	No.	Author(s)	Title	Issued by	Date
	11	Felker & Rose	The Evaluation of a Public Document: The Case of FCC's Marine Radio Rules for Recreational Boaters	AIR	February 1981
	12	Holland	Psycholinguistic Alternatives to Readability Formulas	AIR	May 1981
	13	Holland & Redish	Strategies for Understanding Forms and Other Public Documents	AIR	September 1981
	14	Swaney, Janik, Bond & Hayes	Editing for Comprehension: Improving the Process Through Reading Protocols	CMU	June 1981
	15	Redish	The Language of the Bureaucracy	AIR	September 1981
	16	Charrow	Linguistic Theory and the Study of Legal and Bureaucratic Language	AIR	September 1981
	17	Holland & Rose	A Comparison of Prose and Algorithms for Presenting Complex Instructions	AIR	November 1981
		Felker (Ed.)	Document Design: A Review of the Relevant Research (ED 192 331)	AIR	April 1980
		Felker	Guidelines for Document Designers	AIR	November 1981

Articles by Document Design Project Staff
that Have Been Published or Accepted for Publication

Battison, R., & Goswami, D. Clear writing today. The Journal of Business Communication, Fall 1981 18 (4), pp. 5-16.

Campbell, L., & Holland, V.M. Understanding the language of public documents, because formulas don't. In R. Dipietro (Ed.), Language and the Professions, (In the series, Advances in Discourse Processing). Norwood, NJ: Ablex, in press.

Charrow, R., & Charrow, V. Making legal language understandable: A psycholinguistic study of jury instructions. Columbia Law Review, Nov. 1979, 79, pp. 1306-1374.

Charrow, V. Language in the bureaucracy. To appear in R. DiPietro (Ed.), Language and the Professions, (In the series, Advances in Discourse Processing. Norwood, NJ: Ablex, in press.

Charrow, V. Linguistic theory and the study of legal and bureaucratic language. To appear in L.K. Obler, & L. Menn (Eds.), Exceptional Language, in press.

Charrow, V. Write a will that can be understood. California Lawyer, Nov. 1981, 1 (3). (Published by the State Bar of California.)*

Charrow, V. Improve your writing--and perhaps your image. California Lawyer, Oct. 1981, 1 (2). (Published by the State Bar of California.)*

Charrow, V., & Charow, R. Lawyers' views of the comprehensibility of legal language. In R. Shuy, & A. Shnukal, Language Use and the Uses of Language. Wash., DC: Georgetown University Press, 1980.

Charrow, V., Crandall, J., & Charrow, R. Characteristics and functions of legal language. In R. Kittredge, & J. Lehrberger, Studies of Language in Restricted Semantic Domains. Berlin: Walter DeGruyter, in press.

*These are the first of a regular column by V. Charrow that will appear monthly in California Lawyer. The column is entitled, "Writing It Right."

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Rose, A.M. Problems in public documents. Information Design Journal, in press.

Swarts, H., Flower, L., & Hayes, J.R. Designing protocol studies of the writing process: An introduction. In R. Beach, & L. Bridwell (Eds.), New Directions in Composition Research, in press.

Young, R.E. Arts, crafts, gifts, and knacks: Some disharmonies in the new rhetoric. In A. Freedman and I. Pringle (Eds.), Reinventing the Rhetorical Tradition. Canadian Council of Teachers of English, 1981. Reprinted in Visible Language, 1980, XIV (4), pp. 341-350.

Dissemination of Document Design Project's Work
in Newspaper Articles and Other Media

Articles About Document Design Project's Work by Non-DDP Staff

May '79 Higher Education Daily - article on DDP study of Basic Grant Applications.

Oct. '79 American Education - article on DDP.

Nov. '79 Editorial Eye (issue 35, p.3) - article on "Plain Prose" citing DDP research.

Aug. '80 Pittsburgh Press - article on CMU's DDP research.

Sept.'80 Carnegie-Mellon University Alumni News, Vol. 64 (3) - article on DDP's work on simplifying documents

Nov. '80 Language Planning Newsletter Vol. 6, #4 - article by R. Battison on "Document Design: Language Planning for Paperwork."

Dec. '80 Student Lawyer, "Verbatim" column by Flora Johnson devoted to plain language laws--half of article devoted to AIR's Document Design Center and DDP.

Mar. '81 Editorial Eye (issue 55, p. 5) - article on J. Redish's workshop at conference of the National Association of Government Communicators - how a new approach can improve a document.

Summer '81 "Good Health," syndicated column by Dr. Neil Solomon, M.D. - letter from Dr. John R. Hayes describing DDP's work on medical consent forms, appeared in newspapers throughout the country

Oct. 29, '81 New York Times, Warren Weaver, Jr., Tackling the U.S. Jargon Juggernaut, Washington Talk, A24, article on the Document Design Center, gives credit to NIE for the work of the Document Design Project. Reprinted in newspapers around the country and in the International Herald-Tribune (Paris, France).

Announcements of DDP

Jan. '79 EST Newsletter (p.3) Issue 22

Feb. '79 Tartan, Vol. 79, No. 23 (CMU)

Feb. '79 Reading Today - membership newsletter of the International Reading Association

'79 Federal Design Matters

Radio Interviews

Dec. '78 Gregg and Steinberg on WFFM, Pittsburgh

Nov. 17 '81 J. Redish interviewed on Larry Oldham's radio show, "Newstalk," Beaumont, Texas.

Examples of Articles Using or Citing DDP Work

Dec. '79 National Law Journal - column by A. Siegel citing DDP research on lease terms.

Dec. '79 HUD Weekly Report reporting on evaluation of impact of federal forms in Plain English, and citing AIR (DDP) contribution.

Dec. '79 HUD memo to President Carter on the same topic.

Mar. '80 Testimony of George L. Dyer on Plain English law for Hawaii (before Consumer Protection Committee, House of Representatives), citing work of the Document Design Center and simplification guidelines based on our principles.

Spr. '80 Law & Society Review, Vol. 14, #3, major article by Brenda Danet, "Language in the Legal Process," citing work by Charrow, Redish, as well as articles from *Fine Print (now Simply Stated).

Jun. '80 For many months	Newark Star-Ledger, Newark, N.J., columns by Franklin Gregory citing DDP work--helped pass N.J. plain language bill.
Jan. '81	Stanford Law Review, Vol. 33, #2 - "A Model Plain Language Law," by Bernard Black, cited DDP work and Document Design Center publications.
In press	J. Landesman, & L. Reed, How to write a synthesis document for educators. In S. Ward & L. Reed (Eds.), Knowledge Structure and Use: Perspectives on Synthesis and Interpretation. Wash., D.C.: NIE, 1982

Presentations by DDP Staff at Professional Meetings
September 1978–August 1979

October, 1978	American Dialect Cociety Conf. Georgetown NWAVE Conference Washington, D.C.	Charrow	Presented paper "Legal Language: What is It and What Can We Do About It?"
November 2–3, 1978	NIE Conference on Literacy in the Community Washington, D.C.	Redish	Open discussion–no formal papers
December, 1978	FDA Conference on Patient Package Inserts Washington, D.C.	Siegel	Invited paper on "Wonder Drugs in Wonderland"
		Krug, Charrow & Redish	Each attended one session of conference
December 18–19, 1978	Institute of Medicine, National Academy of Science Committee on Patient Package Inserts Washington, D.C.	Krug	Attended meetings as a member of the Committee (also in February and March, 1979)
December, 1978	Linguistic Society of America Annual Meeting Boston, Mass.	Charrow	Presented paper "A Final Report on Jury Instruction Comprehension"
January, 1979	American Association of Law Schools Chicago, Ill.	Charrow	Presented paper "Why Clear Legal Drafting Should Be Taught in Law Schools"
January 26, 1979	Illinois Supreme Court, Pattern Jury Instruction Committee	Charrow	Gave a talk with Robert Charrow on writing comprehensible jury instructions; distributed DDP brochures
February 9, 1979	Federal Credit Legislation Subcommittee of the Committee on Commerce, Banking & Finance of the Young Lawyers' Section, ABA	Charrow	Attended meeting as member of the Subcommittee
March 1–2, 1979	Practicing Law Institute Workshop on Drafting Documents in Plain Language San Francisco, CA	Redish	Presented papers "How to Draft More Understandable Legal Documents"; "Readability"
March 11–12, 1979	New York, N.Y.	Siegel	Presented "Drafting Simplified Legal Documents: Basic Principles and their Applications"
March 14, 1979	Educational Testing Service, Seminar on "Functional Language of Bilingual Children" Princeton, N.J.	Rodriguez	Seminar participant

March 15, 1979	Conference on English Education and Secondary School English Pittsburgh, PA	Steinberg Young	Presented papers: Steinberg - "English Teachers for Business, Industry and Government" Young - "Performance Objectives: Goals for a Writing Course"
March 16–17, 1979	Conference on English Education Pittsburgh. PA	Flower, Gregg & Hayes	Flower - writing workshop for teachers; Flower, Gregg, & Hayes - participated in symposium "Research on Cognition and Written Language"
March 22-24, 1979	Georgetown Roundtable on Language and Linguistics Washington, D.C.	Charrow	Presented "Characteristics of the Language of Jury Instructions" (with Robert Charrow)
		Redish	Invited chair of special interest session on "Plain English in Public Documents"
March 27, 1979	Interagency Consumer Committee Washington, D.C.	Rodriguez	Attended as member of panel to explore problems of Spanish - speaking consumers
April 2–7, 1979	National Association of Colleges and Universities in Bilingual Education Seattle, Washington	Rodriguez	Chaired Executive Board session; presented paper "Social Functions of Language: Bilingual Children"
April 4, 1979	Conference on College Composition and Communication Minneapolis, MN	Flower Hayes	Presented joint paper "Cognition of Discovery: Defining a Rhetorical Problem"; Flower- chair, Hayes- member of panel on cognitive process approaches to writing
		Young	Presented paper "Thinking, Writing, and the Limits of Memory"
April 8–12, 1979	American Educational Research Association San Francisco, CA	Hayes Flower	Presented joint papers, "Writing with the Reader in Mind", "Process-based Evaluation: Changing the Performer, not the Product"; participated in symposium "Recent Approaches to Writing Research"; Hayes presented paper and commented on session on writing as problem solving.
April 18, 1979	Educational Testing Service seminar on "Ethnographic Analysis of Face-to-Face Interactions" Princeton, NJ	Rodriguez	Participated in seminar

April 27, 1979	Indiana Univ. of Pennsylvania - Workshop for Community College & Four-Year College English Teachers Indiana, PA	Young	Participated in series of papers and workshops on problem analysis and formulation in tagmemic rhetoric
April 28, 1979	American Society of Writers on Legal Subjects, Institute on the Teaching of Legal Writing New York, N.Y.	Redish	Participated in panel on "New Approaches and Techniques in the Teaching of Legal Writing"
May 7–10, 1979	International Federation of Information Processing Societies Conference Blois, France	Hayes	Presented workshop, "Methodology of Interaction", and paper. "Cognition and Man-Machine Interaction"
May 7–11, 1979	SEILLAC conference on "Cognitive Processes in Design" Loire, France	Hayes	Participated in invited conference
May 7, 1979	Eastern Communication Association Annual Convention Philadelphia, PA	Young	Chaired panel, "Rhetorical Invention and Communication Pedagogy"
May 8, 1979	Canadian Council of Teachers of English Ottawa, Ontario	Young	Presented paper, "Arts, Crafts, Gifts, and Knacks: Some Disharmonies in the New Rhetoric"
June 18, 1979	University of Detroit seminar, "Current Theories of Composition" Detroit, Mich.	Young	Presented paper, "Rhetorical Situations and Rhetorical Strategies"
June 27–30, 1979	Chairmen of English Departments Rhode Island	Young	Led seminar, "Composition: Programs and Training"
August 7, 1979	Univ. of Michigan Conference on Teaching Technical and Professional Comm. Ann Arbor, Mich.	Young	Presented paper, "Designing Objectives for Technical Writing Courses"
August 13 & 17, 1979	Coalition of Hispanic Community Agencies, Latino Affairs Office Washington, D.C.	Rodriguez	Met to discuss the Spanish Language Clause in the proposed DC Plain Language Bill
August 16–17, 1979	Univ. of Michigan Engineering Summer Conference on Written Communications for Engineers, Scientists, and Tech. Writers	Young	Presented paper, "Order and Disorder Beyond the Sentence"

Presentations by DDP Staff at Professional Meetings
September 1979–June 1980

September 1-5, 1979	American Psychology Association Annual Meeting New York, N.Y.	Charrow, Felker, Rose, Krug	presented symposium on the work of the DDP
		Hayes	discussant in symposium "Teaching Psychology and Teaching Writing"
September 14, 1979	FDA hearing on "Prescription Drug Labeling Requirements" Washington, D.C.	Redish	presented testimony
September 15, 1979	"Language As Barrier" Conference, Kean College Union, N.J.	Charrow	presented paper "Linguistic Aspects of Legal Language"
October 6, 1979	Seminar on recent developments in writing, Smith College Northampton, Mass.	Flower	seminar participant
October 18-20, 1979	Biennial Convention of American Psychology-Law Society Baltimore, Md.	Charrow	presented paper "A Psycholinguistic Study of Legal Language and Its Comprehensibility" (with R. Charrow)
October 20, 1979	Plain Talk Conference Washington, D.C.	Rodriguez	member of panel on minority language issues
		Redish	presented workshop on revising documents
		Charrow & Redish	presented review of document design research
October 25, 1979	NWAVE conference Montreal, Quebec	Charrow	presented "A Sociolinguistic View of Legal Language" (with R. Charrow)
November 1, 1979	South Atlantic Modern Language Association conference Atlanta, Ga.	Steinberg	presented paper "Applied Humanities"
November 28-December 2, 1979	American Anthropological Association Annual Meeting	Rodriguez	speaker in symposium on naturalistic studies of literacy
December 1, 1979	ABA National Institute on Jurors	Charrow	presented paper "The Legal Implications of Jury Instruction Comprehension" (with R. Charrow)
December 27-29, 1979	Linguistic Society of America Annual Meeting Los Angeles, Calif.	Charrow & Redish	presented paper on linguistics and the study of legal and bureaucratic language
		Holland	presented paper "Comprehension of Complex Conditional Sentences"
December 28, 1979	Modern Language Association San Francisco, Calif.	Young	presented paper on research in writing

January 3, 1979	AALS Annual Meeting Phoenix, Ariz.	Charrow	presented paper "Teaching Legal Writing as Part of a Document Design Process"
January 4, 1980	American Association for the Advancement of Science San Francisco, Calif.	Hayes	presented paper "Problem Solving Models of Writing"
January 10, 1980	Maryland Bar Association Convention	Charrow	member of panel on language-related research relevant to legal writing
January 16, 1980	Faculty seminar on writing Mercer County Community College Princeton, N.J.	Flower	seminar participant
January 17-19, 1980	Management Communication Conference Harvard Business School Boston, Mass.	Flower	Chaired committee to explore the possibilities of cooperative research on management communications
March 1, 1980	Seminar on Writing Today St. Edwards University Austin, Tex.	Young	presented paper "A Comparison of the New Rhetoricians: Romanticist and Classicist"
March 7, 1980	Graduate School of Industrial Administration Carnegie-Mellon University Pittsburgh, Pa.	Young	presented paper "Problem Formulation—From Knack to Art"
March 13-15, 1980	CCCC Meeting Washington, D.C.	Charrow, Felker, Redish	presented symposium on training Federal agency staff to write clear English
		Redish	presented paper "An Undergraduate Course in Professional Writing for Senior Year Humanities Majors"
		Flower	presented paper "The Hidden Structure of the Composing Process" and workshop on "A Primer in Research and Composition"
		Hayes	presented paper on "Recent Protocol Research on Composition"
		Steinberg	presented paper "Preparing Graduate Students for Writing Programs in Business, Industry, and Government"
		Young	presented papers "Designing a Doctoral Program in Rhetoric" and "Some Guides for Improving the Quality of Rhetorical Research"
March 17, 1980	University of Maryland Symposium on Writing	Redish	presented paper on possibilities for research in an undergraduate clear writing course
		Flower	presented paper on research and real-world writing

April 7-11, 1980	AERA Conference Boston, Mass.	Holland	chaired symposium and presented paper on the effects of the logical form and graphical format of complex instructions
		Felker	organized and presented symposium on research on document design and document designers
		Rodriguez	presented paper on research in problems Spanish speakers encounter in completing their income tax returns
		Atlas	presented paper "Writer Insensitivity to Audience: Causes and Cures"
		Flower	presented paper "Uncovering Cognitive Processes in Writing: A Guide to Protocol Analysis"
		Hayes	presented paper "Formulating Sentences in Writing: A Protocol Study"
		Swarts	presented paper "How to Misread a Federal Regulation"
		Bond	presented paper "Translating the Law Into Common Language: A Protocol Study"
April 9, 1980	University of Pittsburgh	Young	presented paper "Arts, Crafts, Gifts, and Knacks: Some Disharmonies in the Rhetoric"
April 16-24, 1980	National Association of Bilingual Education Meeting	Rodriguez	presented paper on quantitative and qualitative research in bilingual education
April 21, 1980	Meeting of the Trustees Carnegie-Mellon University Pittsburgh, Pa.	Young	spoke on graduate programs in English at CMU
April 24, 1980	Washington & Jefferson College Washington, Pa.	Young	presented paper on rhetoric (see April 9, above)
May 30-31, 1980	Conference on Models of the Writing Process SUNY/Albany	Flower	presented paper on protocol analysis
June 2-5, 1980	Faculty Seminar in the NEH Cross-Disciplinary Writing Program Beaver College Glenside, Pa.	Young	presented paper "Why Write? Some Implications of Information Processing Theory"
June 9-13, 1980	Writing Research Seminar in Composition Carnegie-Mellon University Pittsburgh, Pa.	Swarts	spoke on "Teaching a Protocol Coding Scheme to a Second Coder"
		Hayes & Flower	conducted seminar

June 12-14, 1980	ONR Conference Pittsburgh, Pa.	Rose	presented paper "Experiments in Document Design"; member of panel on document design research
June 16, 1980	Seminar on Current Theories of Composition University of Detroit Detroit, Mich.	Young	presented paper on problems in the process of composing
June 16-20, 1980	Faculty Seminar Dickinson College Carlisle, Pa.	Flower	conducted the seminar
June 23, 1980	Summer Seminar on Writing National Endowment for the Humanities Beaver College, Glenside, Pa.	Hayes	served as consultant
June 19-23, 1980	Summer Seminar on Writing Washington Center for Learning Alternatives Washington, D.C.	Redish	conducted session on "The Process Model as a Framework for a Composition Course"
		Felker	conducted session on "Evaluation in a Composition Course"

Presentations by DDP Staff at Professional Meetings
July 1980—November 1981

July 1980	Maryland Plain Language Study Committee	Redish	Speaker on "Defining Clear English for a Plain Language Law."
July 1980	Middlebury College Middlebury, VT	Young	Consultant on program for cross-disciplinary writing instruction.
July 1980	Bread Loaf School of English Bread Loaf, VT	Young Goswami	Visiting consultant in writing. Teacher
August 1980	Conference on Teaching Technical and Professional Communication University of Michigan Ann Arbor, MI	Young	Consultant on curriculum planning.
August 1980	Conference on Teaching Scientific and Technical English to Non-Native Speakers University of Michigan Ann Arbor, MI	Young	Consultant
August 1980	Conference on Written Communication for Engineers, Scientists, and Technical Writers University of Michigan Ann Arbor, MI	Young	Lecturer
September 1980	The NIE-FIPSE Workshop on Research in Writing and Practice Los Angeles, CA	Redish	Participant/speaker
September 1980	IBM Boulder, CO	Flower	Lecturer
October 1980	Symposium on Writing and Designing Documents: Research and Practical Solutions Carnegie-Mellon University Pittsburgh, PA	Steinberg	Host for symposium and chair for session "Legal Communication"
		Flower, Hayes	Paper on "Formulating Sentences in Writing"
		Redish, Charrow	Paper on "The Problems in Bureaucratic Documents"
		Holland	Paper on "Revising a Government Document: The Case of the Medicaid Recertification Form"

October 1980	NIE-LRDC Conference on Thinking and Learning Skills University of Pittsburgh Pittsburgh, PA	Hayes	Participant
October 1980	University of Delaware Symposium II on Language Studies Newark, DE	Charrow	Paper on "Language in the Bureaucracy"
		Holland	Paper on "Understanding the Language of Public Documents Because Formulas Don't"
November 1980	Research in Writing Seminar National Council of Teachers of English Cincinnati, OH	Flower	Presented paper
		Charrow	Co-chaired session
November 1980	SAADE-SAMLA Conference Atlanta, GA	Young	Paper on "Graduate Studies and the Document Design Project at Carnegie-Mellon University"
December 1980	National Association of Government Communicators	Redish	Speaker for "Adding Research and Evaluation to the Editor's Role"
December 1980	Linguistic Society of America Annual Meeting	Holland	Speaker for "Discourse Principles in a Medicaid Recertification Form"
1981	Delaware Valley Conference on Writing	Goswami	Keynote speaker on "Problems of Articulation: From Theory to Practice"
January 1981	Police Management Writing Project New York, NY	Charrow	Presentation on clear writing
March 1981	Tennessee Bar Association Will Drafting Seminar Nashville, TN	Charrow	Invited paper on "Writing a Clearer Will"
March 1981	Thirty-Second Georgetown University Roundtable on Language and Linguistics Washington, DC	Redish, Holland	Speakers on "Strategies for Understanding Forms and Other Public Documents"
March 1981 April 1981	Practising Law Institute course on "Drafting Documents in Plain English-1981" San Francisco, CA New York, NY	Redish	Faculty speaker on "How to Write Regulations (and Other Legal Documents) in Clear English"
March 1981	Texas Conference on Writing Research Austin, TX	Flower	Paper on "Turning Points in the Composing Process"

March 1981	Conference on College Composition and Communication Dallas, TX	Flower	Paper on "The Psychological Process of Decision and Choice in Writing"
		Young	Paper "Research in the New Rhetoric"
		Redish	Paper on "What College Composition Teachers Should Know About Writing in the Bureacracy"
		Goswami	Paper on "Using Research to Design Curricula in Writing"
March 1981	Conference on Information Processing and Decision-Making University of Oregon Eugene, OR	Hayes	Participant
March 1981	Symposium on Greek Rhetoric University of Pittsburgh Pittsburgh, PA	Young	Moderator
April 1981	Temple University Philadelphia, PA	Flower	Gave lecture
April 1981	American Educational Research Association Los Angeles, CA	Flower	Paper on "Episodes and Goals in Writing"
		Hayes	Chairman of session and presented paper "Plans and Sentences"
		Janik	Paper on "Informed Consent: Reality or Illusion?"
		Swaney	Paper on "Complex Editing Skills: Teaching Poor Editors to Perceive and Correct Problems"
		Redish	Critic for session "Document Design and Revision" Speaker on "The Effects of Document Design Principles on Users' Performance"
		Felker	Chaired "Making Public Documents Understandable: Research on Problems and Solutions"
		Holland	Paper on "The Effects of Algorithms vs. Prose on Understanding Complex Conditional Instructions"
		Rose	Paper on "Problems in Public Documents"
April 1981	Eastern Communications Assn. Pittsburgh, PA	Young	Paper "Teaching the Formulation of Problems"

April 1981	Department of the Navy Arlington, VA	Charrow	Expert witness to give linguistic testimony at administrative hearing regarding the meaning of a contract clause
April 1981	Allegheny Institute Pittsburgh, PA	Charrow	Presentation of "The Comprehensibility of Legal Language"
April 1981	Document Design Center American Instiutes for Research Washington, DC	Goswami	Speaker on "Using Research to Develop Courses in Business, Government, and Professional Writing"
May 1981	Old Dominion University Norfolk, VA	Young	Lecture/workshop "Modern Rhetorical Invention"
May 1981	Tidewater Writing Project Norfolk, VA	Goswami	Speaker on "Researchers-in-Residence: Contexts and Applications"
May 1981	Symposium on the "Problems and Promise of the Plain Language Movement." Oregon Dept. of Commerce and Williamette University of Law Salem, OR	Charrow	Keynote speaker for "What is Plain Language: How Do You Write It?"
June 1981	Law and Society Association Annual Meeting Amherst, MA	Charrow	Chaired session on "Law and Language"
June 1981	Conference on Literacy in the 80's Ann Arbor, MI	Redish	Speaker on "The Language of the Bureaucracy"
June 8–12, 1981	Writing Research Seminar in Composition Carnegie-Mellon Univ. Pittsburgh, PA	Bond, Flower Hayes, Swarts	Assisted in conducting seminar
June 15–Aug. 8, 1981	NEH Summer Seminar Carnegie-Mellon University Pittsburgh, PA	Young	Director "Modern Developments in the Art of Invention"
June 1981	Seminar on Rhetoric Purdue University West Lafayette, IN	Young	Paper "Situations and Strategies in the Composing Process"

July 1981	Wyoming Conference on Freshmen and Sophomore English	Flower	Participant
July 1981	Writing Across the Curriculum Project Beaver College Glenside, PA	Hayes	Paper on "Writing and Creativity"
July 1981	Writing in the Humanities: NEH Summer Institutes in the Teaching of Writing Beaver College Glenside, PA	Young	Paper "Concepts of Art and the Teaching of Writing"
July 1981	Conference on Written Communication for Engineers, Scientists, and Technical Writers University of Michigan Ann Arbor, MI	Young	Lecturer
July 1981	Conference on Teaching Scientific and Technical English to Non-Native Speakers of English University of Michigan Ann Arbor, MI	Young	Lecture and Workshop
August 1981	APA Los Angeles, CA	Hayes	Paper on "Creativity"
September 1981	Annual Meeting of the Int'l Sociological Association, Research Committee on Sociology of Law, Wolfson College, Oxford	Charrow & R. Charrow	Presented an "Overview of the Reform of Legal Language"
September 1981	Society for Technical Communication Washington, DC	Redish	Paper on "Planning Documents to Make Information Retrievable" (Presented by Battison)
October 1981	Police Management Writing Project, Invitational Conference New York, NY	Charrow, Redish	Speakers for: "Clear English and Police Writing"
October 1981	Virginia Council of Teachers of English Blacksburg, VA	Goswami	Symposium presentation
October 1981	New York State Council of English Teachers	Goswami	Keynote speaker

October 1981	University of Texas Austin, TX	Flower	Consultant for NIE Project on "Evaluating the Effectiveness of College Writing Programs"
October 1981	Three University Consortium in Professional Rhetoric Pittsburgh, PA	Flower	Participant
October 1981	Commission of Scholars Illinois Board of Higher Education Chicago, IL	Steinberg	Participant
October 1981	Symposium on Design Information Carnegie-Mellon University Pittsburg, PA	Steinberg	Panel member for workshop
November 1981	South Atlantic Modern Language Association Louisville, KY	Goswami	Presentation: "Moving from Research to Designing Advanced Composition Courses"
November 1981	Association for Learning Center in Higher Education Fall Conference Pittsburgh, PA	Flower	Lectured on "Teaching Revision"
November 1981	State University of New York Albany, NY	Flower	Gave faculty colloquium lecture "Pregnant Pauses in Writing"
November 1981	National Council of Teachers of English Boston, MA	Flower	Paper on "New Research on Revision"
November 1981	Southeastern Louisiana Univ. Hammond, LA	Hayes	Invited address on creativity